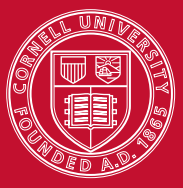

Cornell University

Rehabilitation Research and Training Center
on Disability Demographics and Statistics

Disability Statistics User Guide Series

A Guide to Disability Statistics from the Survey of Income and Program Participation

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Introduction

The primary purpose of the Survey of Income and Program Participation (SIPP), which is administered by the U.S. Census Bureau, is to collect information on the income and program participation of a nationally representative sample of households and individuals living in the United States. Each new fielding of the SIPP is called a "panel," and each panel includes several interviews conducted every 4 months over a period of at least 32 months. Since 1984, the Census Bureau has fielded 12 panels, including the recently completed 2001 panel. The 2001 panel includes nine interviews over four month intervals of a nationally representative sample of the 2001 U.S. population in calendar years 2001 through 2003.

The SIPP's multi-interview design allows researchers to examine a population's characteristics at a point in time ("cross-sectional analysis), as well as changes in those characteristics over time ("longitudinal analysis"). That said, the survey was intended primarily to support longitudinal analyses, as other larger cross-sectional surveys, such as the Current Population Survey (CPS) are more commonly used to generate cross-sectional labor market and income statistics on an annual basis. The SIPP data are available in several formats from the Census Bureau, and most panels can be downloaded from the Census Bureau's website at www.sipp.census.gov/sipp/access.html.

Among its many advantages, the SIPP includes several questions on health, functional limitations, employment, and participation in federal disability and other cash and in-kind assistance programs. It has therefore become the basis for several recent studies of people with disabilities that have focused, for example, on employment trends, changes in the Americans with Disabilities Act (ADA), and program participation (Burkhauser, Houtenville, and Wittenburg 2003; Kruse and Schur 2003; Hotchkiss 2003; Acemoglu and Angrist 2001; McNeil 2000; DeLeire 2000).

This paper discusses the utility of the SIPP in disability analyses, including a summary of descriptive statistics on people with disabilities from multiple SIPP panels, including the most recent SIPP panel (2001). It is part of a series of papers for the Cornell Statistics Rehabilitation Research and Training Center (Cornell Stats RRTC),

which is also producing user guides for the American Community Survey (ACS), the Census 2000, the 2004 Current Population Survey (CPS), the 2002 National Health Interview Survey (NHIS), and the 2001 Panel Survey of Income Dynamics (PSID).

The findings provide insights into the various health, employment, income, and program participation outcomes that may be associated with different definitions of disability and illustrates the potential for using SIPP data in further disability analyses. Similar to the findings in the other user guide papers, our descriptive findings highlight the differences in the demographic composition and outcomes across disability definitions, underscoring the importance of carefully selecting an appropriate disability conceptualization in generating disability statistics. Our findings also illustrate the flexibility that the SIPP provides to generate cross-sectional and longitudinal estimates of disability prevalence and employment and program participation outcomes using single or multiple interviews from the 2001 SIPP, as well as from earlier panels using special linked files on Social Security Administration (SSA) program and earnings information that are available on a restricted basis. Despite these advantages, users should exercise caution in selecting disability definitions in producing statistics from the 2001 SIPP, as well earlier SIPP panels, because the position and wording of some disability questions (items on work limitations, for example) changes over the panel and hence, could influence the patterns observed in the data.

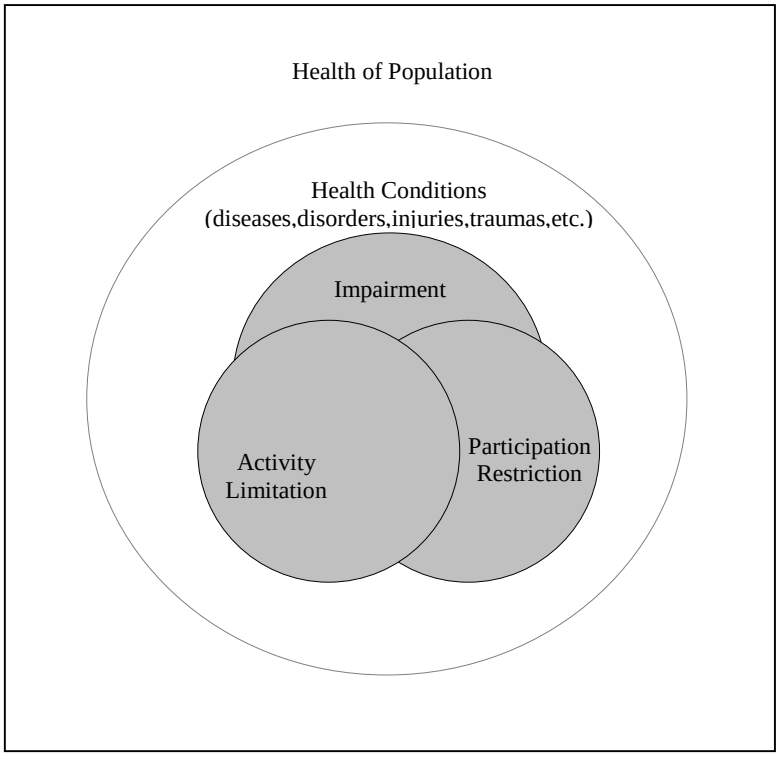
Conceptual Model of Disability

The two major conceptual models of disability are the World Health Organization's International Classification of Functioning, Disability and Health, or ICF (WHO, 2001) and the model developed by Saad Nagi (1965, 1979). In both, disability is a dynamic relationship between a person's health condition, his or her personal characteristics, and the physical and social environment. Changes in any one of these factors over time can affect a person's ability to function and participate in activities of daily living. For example, an environment that provides accommodation, such as a wheelchair ramp, may allow a person with a health condition to function at the level of a person without a health condition. In this case, the person may not consider her health

measure does not necessarily imply the interaction of a health condition with a social activity. Consequently, researchers should use some caution in using these composite measures to define a population covered under a broad set of disability policies.

Figure 1 illustrates the overlapping nature of the concepts in the ICF model of disability. The ICF universe is the health of the population as a whole. The shaded area represents the ICF concept of a disability. While these concepts may seem to follow a progression—that is, an impairment leading to an activity limitation leading to a participation restriction—it is not necessarily the case. It is possible that a person may have a participation restriction without an activity limitation or impairment. For example, a person diagnosed as HIV positive may not have an evident impairment or activity limitation but may not be able to find employment because of discrimination against his health condition. For the same reason, a person with a history of mental illness but who no longer has an activity limitation or a loss in capacity may also be unable to find work.

Figure 1. Simplified ICF Conceptual Model of Disability



condition a disability. These models are described and compared in Jette and Badley (1998).

In the papers in the Cornell Stats RRTC User Guide series, the ICF concepts are used to create operational definitions of disability. The concepts include impairment, activity limitation, participation restriction, and disability (see WHO 2001). Each concept assumes the presence of a health condition. Examples of health conditions are listed in the International Classification of Diseases, Tenth Edition (ICD-10) and they encompass diseases, injuries, health disorders, and other health related conditions.

An "impairment" is defined as a *significant* deviation from, or loss in, body function or structure. For example, the loss of a limb or eyesight is considered impairments. In some surveys, impairments are defined as long-lasting health conditions that limit vision or hearing, physical activity, or mental capabilities.

An "activity limitation" is defined as a difficulty in executing activities. For example, trouble with dressing, bathing, or performing other activities of daily living because of a health condition are considered activity limitations. In some surveys, activity limitations are defined on the basis of a standard set of questions on such activities as getting out bed, bathing, dressing, and using the toilet.

A "participation restriction" is defined as the inability to take part in conventional life situations for reasons that may be beyond his or her control. For example, a working-age person with a severe health condition may find it difficult to work as a result of the workplace physical environment (e.g., lack of reasonable employer accommodations) and/or the social environment (e.g., discrimination). In some surveys, participation restrictions are identified by questions on whether the person has a long-lasting health condition that limits his or her ability to work, or that affects his or her ability to leave the home to go shopping, to church, or to the doctor's office, for example.

The final ICF disability concept is the presence of any *health condition*. The term any health condition is used to describe the presence of an impairment, an activity limitation and/or a participation restriction. This is a very broad concept of health conditions. However, it is different from most conceptualizations of disability used in US public policy towards people with disabilities because the any health condition

Operational Issues

Translating the ICF concepts into an operational definition of disability in surveys is not always a straightforward task largely because the decision to identify survey questions as pertaining to one of the three ICF concepts is based on the survey designer's (or researcher's) judgment, not on rules from the ICF. Consequently, survey questions may be interpreted as being related to both an activity limitation and a participation restriction. Our approach was to make clear and consistent judgments so that it may be possible to make comparisons within of these concepts within the SIPP, as well as comparisons to outside data sources.

Sampling Frame

The SIPP sampling frame is designed to produce detailed national-level monthly estimates of the demographic, program participation, employment, and health characteristics of a nationally representative sample. The primary sampling units (PSU) include a list of U.S. counties and cities, along with population counts and other data for these units from the most recent population census.[1] Unlike the CPS and the ACS samples, the SIPP sample is not designed to produce state-level estimates. The Census Bureau uses both in-person and telephone interviews to collect data, and computer-assisted interviewing (CAI) have been used since 1996 to facilitate the data collection process.

To keep interviewers continually in the field, the Census Bureau divides each SIPP panel into four random subsamples called "rotation groups." Together, the four rotation groups make up one interview "wave." Each group is interviewed in a different month over four consecutive months about activities and characteristics over the previous four-month period. Each group is then re-interviewed at four-month intervals. For example, for the first interview wave of the 2001 panel, rotation groups 1, 2, 3, and 4

[1] The SIPP uses a multistage-stratified sample of the U.S. civilian noninstitutionalized population. The first stage involves selecting PSU made up of one or more contiguous counties. The second stage samples clustered addresses within the selected PSUs.

were interviewed in February, March, April, and May 2001, respectively, about their activities over the previous four month period (the second interview wave then begins with rotation group 1 in June 2001).

The interview sample includes individuals in the noninstitutionalized population living in the U.S., and questions are directed to each member of a household age 15 or older. [2] After the wave 1 interview, these original sample members are interviewed in all subsequent waves, as are all current residents age 15 and older of the households in which the original sample members are living during waves 2, 3, and 4. Proxy response is permitted when household members are not available for interviewing. Parents or guardians provide information on children under the age of 15 in the household.

The excluded institutionalized population primarily represents those in correctional institutions and nursing homes (91 percent of the 4.1 million institutionalized people included in the 2000 Census counts) (Westat and Mathematica Policy Research 2001). Because people with disabilities are over-represented in these facilities, it is likely that SIPP underestimates the prevalence of disability in the total population.

Original Panel Design and Subsequent Changes

The Census Bureau collected a new panel of SIPP data each year from 1984 through 1993. The duration and number of interviews has varied, but starting in 1990, all panels have included at least eight interviews (Table 1). Because the end of some panels overlap with the beginning of subsequent panels, some researchers have combined information from overlapping interviews in different panels to increase the sample size for their analyses (e.g., McNeil 2000).

[2] The population for the SIPP interviews includes people living in group quarters, such as dormitories, rooming houses, and religious group dwellings. The population does not include crew members of merchant vessels, Armed Forces personnel living in military barracks, institutionalized persons such as correctional facility inmates, residents of long-term care facilities, and citizens residing abroad. Foreign visitors who work or attend school in this country and their families are eligible for interviews.

In response to a comprehensive review of the SIPP, the Census Bureau redesigned the panel in 1996.[3] Although this effort left many general features of the SIPP intact, several changes in both interviewing techniques and the questionnaire have implications for (1) the collection of several data elements, including several measures in the ICF conceptual model, and (2) the descriptive statistics produced from different SIPP panels, particularly in making comparisons across panels. Of the many changes, those made to improve the efficiency and quality of the overall data collection are particularly important.

The major changes included a larger initial sample (40,000 target households) than in previous panels, a single four-year panel instead of overlapping 32-month panels, at least 12 interviews, CAI, and an oversampling of households in areas with high poverty rates. Additionally, the sample for the 1996 panel was redesign on the basis of the 1990 Census.[4]

Since the redesign, the Census Bureau has completed two SIPP panels (1996 and 2001) and has fielded another (SIPP 2004). [5] Although panels have been fielded less often since the redesign, the new panels include a significantly larger population that is tracked over longer periods.

The major changes in the redesign also have important implications for comparisons across SIPP panels, as the data collection methodology was changed with the introduction of the 1996 panel. The Census Bureau also made some changes to the location of certain health questions, which will affect within and cross-panel comparisons in important ways. While these changes do not necessarily rule out cross-panel comparisons, results should be interpreted cautiously as the wording and/or positioning of questions might have changed.

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[3] The Census cancelled the 1994 and 1995 panels in anticipation of the rollout of the 1996 redesign.

[4] The 2001 panel used the same sample redesign as was used in the 1996 panel. The 2004 panel, however, implemented a new sample redesign using the 2000 Census.

[5] The Census began a panel in 2000 but discontinued interviewing after 2 waves. The Census is currently in the field with the 2004 SIPP panel, though data are not yet available. For more information, see Westat and Mathematica Policy Research 2001.

Interview Design and Associated Data Files

Core and Topical Modules. Each SIPP interview includes a core and topical module. The core questions, which address demographic, program participation, and employment information over the previous four-month period, are repeated in each wave of interviews. Topical modules cover a broad range of subjects that vary by interview wave within each panel. The modules also vary by panel and include questions on personal history, childcare, assets, program eligibility, child support, disability, school enrollment, taxes, and annual income. In some cases, the topical modules within a panel are repeated in a subsequent interview.

Data Files. Three types of data files— core, topical module, and panel data—are generated from each panel. The core files include all information elicited by in the core questionnaire during each interview wave. The topical module files include all information elicited by the topical module from each interview wave. The panel files, the most comprehensive of all three, include information from the core questionnaire, along with panel weights, across all interview waves. Core and topical module files are available for each interview wave. Panel files are available when all core and topical module data are released.[6] Each file includes identifiers that researchers can use to link data across files (e.g., core to topical module files).[7]

All three types of files can be used to develop cross-sectional or longitudinal estimates. Each core file includes several reference-month weights for people, households, families, and subfamilies.[8] Topical module weights are available for estimates specific to a given interview wave, and panel files include multiple longitudinal weights that account for sampling across a specific year and the entire panel.

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[6] There is generally a time lag in the release of these data while Census develops panel weights and processes data from earlier waves.

[7] There are specific protocols for linking the core and topical module files, which are described in detail at U.S. Census Bureau (2004).

[8] Prior to the 1996 panel, reference months weights were not available for families or subfamilies.

Sample Attrition. As with all panel data, attrition from one interview wave to the next poses important challenges in terms of how the data can be used, especially in later SIPP waves. The Census Bureau (2004) noted that the rate of sample loss in SIPP generally declines from one wave to the next. The bureau estimated that nonresponse rates for wave 1 were approximately 8 percent across interviews for the 1990-1996 panels. However, there is usually a sizable sample loss at wave 2, although the rate of additional attrition falls off with each subsequent wave. The bureau also found that before the 1992 panel, roughly 20 percent of the original sample was lost by the time wave 8 was completed. The attrition rate for the 1996 panel, which included four more interviews, was 35.5 percent by the end of the wave 12. The longitudinal weights in the panel files adjust for attrition, although researchers using these files should make a point of ensuring that these weights capture attrition in specific subpopulations.

Westat and Mathematica (2001) provides a comprehensive review of how to use the weights and link methodologies when generating estimates using the core, topical module, and panel files. Estimates should be developed cautiously, particularly when files are combined across multiple periods because the procedures for generating estimates depends on the population selected (e.g., individual or family-level estimates), the time frame (e.g., interview wave), and file structure (core, topical module, and/or panel). Westat and Mathematica also review imputation procedures, which are particularly important in multivariate analyses.

Questions on Disability

Each SIPP panel includes one question about the presence of a work limitation during the first (core) interview and more detailed questions about health, functional limitation status, and medical history in the topical modules. However, important changes to the core and topical module questions from one panel to the next will affect the production of disability statistics, particularly cross-panel comparisons.

For example, the question on work limitation in the core interview is as follows:

"Does [insert name] have a physical, mental, or other health condition which limits the kind or amount of work [insert name] can do?"

Because this question is phrased differently within and across panels, caution must be used when comparing trends in work limitation prevalence. Before 1996, this question was part of specific health-related topical modules that were used several times during the course of a panel. During the 1996 redesign, the question was moved up to the core interview and retained in all subsequent interviews. Moreover, before 1996, respondents were reminded of their earlier answers to this question, but that is not the case as of 1996.[9] Finally, in the 1996 and 2001 SIPP, the position of the work limitation question in wave 1 is different from its position in all subsequent waves. That is, although the question still appears in the core questionnaire in wave 2 and beyond, it follows a new series of employment questions that remind respondents of their answers to their employment question from the previous interview.

These changes affect estimates of disability prevalence that are based on the work-limitation question in important ways. For instance, estimates based on the later waves of the 1996 panel and on the 2001 panel are lower than estimates based on the pre-1996 panels. We cannot, however, infer that the disability has become less prevalent over the years because, as is shown in Maag, Weathers and Wittenburg (2005) (and below), the absence of a reminder about previous answers to the work-limitation question in the post-1996 panels is associated with lower reported work limitation prevalence. While both methods of asking questions (i.e., reminding respondents of their previous answers as was done in the pre 1996 panels and asking questions independently as was done in the post-1996 panels) have their relative advantages, the change in the method of asking the question has important implications for making comparisons across and within panels. Additionally, the post-1996 estimates of disability prevalence following interview one might be relatively lower than the first interview because the work-limitation question is positioned *after* a new series of employment questions that *does* remind respondents of their previous answers to these questions and as such influences their answer to the work-limitation question.

[9] Prior to the 1996 panel, the follow-up question was worded as follows: "We have recorded that [insert name]'s health limits the kind or amount of work [insert name] can do. Is that correct?"

Topical Modules. In addition to the basic question in the core interviews, the SIPP includes several detailed questions on the health and function status of respondents in four health-related topical modules (Table 2).

· The Functional Limitations and Disability module

· The Work Disability History module

· The Medical Expense and Work Disability module

· The Health and Disability and Health Status and Utilization of Health Services module

The Functional Limitations and Disability topical module, which contains the most comprehensive set of disability-related questions, has been available since 1990 and was included in two interviews in each SIPP panel except in 1991, when it was included once. The module covers general health status, activities of daily living (ADLs), instrumental activities of daily living (IADLs) and, since the 1996 redesign, detailed questions on specific health conditions in addition to specific physical and mental conditions affecting the respondent.[10] The topical module also includes questions on specific health conditions of those under age 22. Because of its detail, this module is used more than any other in the SIPP for disability research (Maag, Weathers, and Wittenburg 2005).

The Work Disability History topical module, which is always included in wave 2, covers questions about the respondent's chronic health history, including start and end dates for disability onset. The Medical Expense and Work Disability module includes questions on the use of medical services and additional questions on the respondent's history of limitations that affect their ability to work. The Health and Disability and Health Status and Utilization of Health Services module contains health related questions

[10] Pre 1996 SIPP panels included more limited forms of this information.

for all panels up through 1990 and was subsequently transformed into the aforementioned Health and Functional Limitations TM in 1990.

As mentioned, the Functional Limitations and Disability topical module has been used more than any other model in disability research because of the detailed nature of the health questions. For instance, the questions cover an array of disability conceptualizations that researchers can use to construct numerous measures of health and functional status. Because the Functional Limitations and Disability module is repeated, researchers can also use these measures to create multi-period measures of health status (e.g., reported limitations over two periods). The remaining two active topical modules are generally contain less specific health and functioning information, though researchers can use these data to examine specific issues related to disability onset (the Work Disability History module) and medical expenses (Medical Expense and Work Disability module). In general, the questions in these two topical modules are generally similar from one panel to the next, though, as noted above, the 1996 redesign did fundamentally reshape the way respondents are asked about work limitations.

Methodology and Data Definitions

The analysis is based primarily on recently available data from the 2001 SIPP panel, which are consistent with the timeframe used in other user guides in the Cornell Stats RRTC effort. Through four groups of descriptive estimates, we both examine the basic features of the SIPP data that are comparable to data in the Cornell Stats RRTC series, and illustrate some SIPP features that make it uniquely suitable for disability research, including linkages to SSA administrative records.

The first group of descriptive statistics includes cross-sectional estimates of the demographic, employment, and economic well-being measures for respondents who reported a health or functional limitation that is congruent with the ICF model described above. The second group includes longitudinal estimates of changes in health, employment, and program participation throughout the panel. It also includes work-limitation prevalence rates from all of the core interviews throughout the 2001 panel to examine the potential for making comparisons of prevalence rates within panels. The

third group of descriptive statistics is based on estimates from Stapleton, Wittenburg, and Maag (2005) to illustrate the potential for linking the survey files to administrative earnings and program records. The final group of statistics provides a comparison of SIPP estimates from the first group to similar estimates in other surveys included in the Cornell Stats RRTC user guide series.

We present disability prevalence rates for all ages, though the analysis of employment, program participation, and economic well-being focuses largely on the working-age population, which is defined as individuals age 25 to 61 at the time of the survey. This population has been used in several studies of working-age people with disabilities because the age range falls at a time when most people have completed all of their schooling (including post-secondary schooling), but before the age of early retirement.

Table 3 presents the conceptualizations of the disability, economic well-being, and employment measures used in this analysis. A more detailed description of these variables appears in Appendix A.

As described above, the disability concepts include participation restrictions, activity limitations, and impairment. For adults, the variable used to define participation restrictions come from the wave 5 core survey for adults age 18 to 69 and pertain to physical, mental, or health conditions that limit the kind or amount of work a person is able to do. For children, the variable comes from the child portion of the Functional Limitations and Disability topical module (administered during wave 5) and indicates whether youth age 6 to 17 reported limitations in their ability to do regular schoolwork because of a physical, learning, or mental condition.

Activity limitations include an inability to perform both instrumental activities of daily living (IADLs) and activities of daily living (ADLs), while impairment include mental, physical, and sensory limitations. These five concepts, which vary by age, were created from variables in the Functional Limitations and Disability topical module administered in wave 5. For example, the questions for IADLs and physical limitations were not asked of children under age 15. Respondents who answered yes to any of these

limitations (as described in table 3) were coded as disabled due to the specific limitation or impairment.

The summary measure of *any disability* represents any participation restriction, activity limitation, or impairment for each of the age groups. For most respondents (6 to 69 years old), the any disability measure includes all six disability measures noted above. For respondents over age 69, the any disability measure includes respondents with activity limitations (IADLs or ADLs) and/or impairments (mental, physical, or sensory) because they were not asked about work limitations.

It is important to note that the SIPP can be used to create several additional disability measures not covered in this report, and users should develop their own conceptualization based on their analysis needs (see Appendix A, Table A-7). In many cases, researchers have used a combination of conceptualizations in the aforementioned six categories. For example, Kruse and Schur (2003) and Maag, Weathers, and Wittenburg (2005) created several composite measures of disability status using several ADL, IADL, and functional limitation measures as well as other measures, such as housework limitations. Additionally, the Functional Limitations or Disability topical module includes measures of alternative participation restrictions—such as difficulty completing housework—and several measures of severity, such as whether a person needs a personal assistant to engage in an ADL or an IADL, that have been used in previous studies (e.g., Burkhauser, Houtenville, and Wittenburg 2003).

Also noteworthy is that McNeil (2000) found that some variables were not reliable across interviews and, hence, might not be appropriate for identifying populations with disabilities. He found that responses to specific questions that capture very straightforward impairments, such as difficulty seeing and hearing, change significantly from interview to interview. However, Maag, Weathers, and Wittenburg (2005) also found that responses to other measures, including the work-limitation measure included here, generally do not change very much across interviews.

The indicators that we use to examine the characteristics of and outcomes for people within each the disability category are defined such that they are consistent with the other user guides in the Cornell Stats RRTC series. Indicators of economic well-

being are measured annually and are presented relative to the poverty line and adjusted for family size. Family income is annualized over the period of June 2001 through May 2002.[11] The poverty threshold values in the 2001 SIPP core files are measured monthly.[12] Because poverty thresholds change with changes in family size and in the number of children relative to adults, we average the thresholds over the 12-month period and annualize the results.[13] The employment indicators include any employment during the reference period, which represents any report of earnings in the reference month. In most tables, employment is measured by using a monthly reference period (May 2002) and an annual reference period (June 2001 through May 2002).[14] For the annual measures, "employed sometime during the previous year" indicates that the respondent had worked 52 or more hours over the course of the year, and "employed full-time during the previous year" indicates that the responded worked 35 or more hours for 50 or more weeks.

The descriptive analysis covers across a broad range of characteristics. An expanded set of descriptive statistics is included to be consistent with the presentation of findings from other data sources in the Cornell Stats RRTC *User Guide* series. These tables provide a comprehensive picture of trends in disability prevalence, employment, and income across a range of definitions. All of the estimates are weighted with the person level weights on topical module 5. Appendix B summarizes the standard errors for the major variables in each of the tables for readers interested in examining significant differences across subgroups.

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[11] May 2002 represents the month during wave 5 (the wave that the Functional Limitations and Disability topical module was administered) for which all respondents have wave 5 data. (As mentioned, the SIPP interviewing structure includes four rotation groups with four different sets of reference months. All four rotation groups included May 2002 as a reference month in wave 5.)

[12] This is a change from previous panels in which core monthly files contained annual poverty threshold values.

[13] See U.S. Department of Health and Human Services (2005) for a detailed list of poverty measures and their relative advantages and disadvantages for measuring economic status.

[14] In Table 8, employment is measured at two points of time (May 2002 and May 2003) to depict changes in income since the respondents wave 5 interview.

Cross-Sectional Estimates of Demographic Characteristics, Employment Characteristics, and Economic Well-Being

The large sample sizes in the SIPP allow researchers to generate cross-sectional estimates across a wide range of characteristics. While the primary advantages of the SIPP are for longitudinal analyses, many researchers have used these data for cross-sectional studies because they include detailed information on characteristics, such as health and functional limitation status, not readily available in other surveys, such as the CPS.

Table 4 summarizes prevalence rates for each of the disability conceptualizations described above across several age groups that reflect differences in activities.[15] These age groups are youth age 6 to 17 in primary and secondary school, people age 18 to 24 who are generally making the transition from school to work, working people age 25 to 61, people age 62 to 64 who have retired early, and people age 65 and older who have taken regular retirement.[16] The rows are broken down into sections for the population age 6 and older and for each of the age categories described above. The columns provide breakdowns across disability status, including people without disabilities, defined as a respondent who does not report a limitation in any of the six disability categories; people with *any* disabilities, which includes respondents who report one or more disabilities defined according to the six definitions of disability noted above; and people with disabilities within each disability conceptualization.

Of the 226 million people age 6 and over, 56.8 million (20 percent) report some type of participation restriction, activity limitation, or impairment, though two important caveats apply to this statistic. First, the availability of information on disability in the SIPP varies by age group. For example, the SIPP does not include information on IADLs

[15] The disability types will not sum to the total population with a disability because individuals may report more than one disability type (i.e., the types are not mutually exclusive).

[16] The SIPP does not collect detailed activity level information on household members under the age of 5 years old.

or physical impairments for youth age 6 to 17. Second, the definition of activities, such as work/school limitations, varies by group as well. As noted in Table 3, for those ages 18 to 69, this limitation is defined in terms of work, whereas for those under age 18, the limitation is defined in terms of school-related activities.

However, as noted above, researchers and policy makers should be careful in using this estimate to define a population with disabilities for policy analysis. For example, the above estimate represents an estimate for the entire population and, hence includes a very large number of people age 70 and older (more than 15 million people) who are more likely to report these conditions. Consequently, this overall prevalence estimate would not be appropriate in measuring the size of the population covered by disability policy targeted to, say, the working age population (e.g., SSA disability programs).

More reliable estimates of prevalence are available for age groups when the survey questions are geared toward the activities of people within that age group. For those under age 70, 10.3 percent of adults (age 18-69) and 7.6 percent of children (age 6 to 17) report a participation restriction involving work and school, respectively. The prevalence of work limitations generally increases with age, as the frequency of reported work limitations is much greater for adults age 62 to 64 relative to other age groups (22.9 percent).[17] The pattern is similar for ADLs and IADLs, which, unlike the work limitation measures, are available for all adults over age 17. Not surprisingly, the incidence of ADLs and IADLs rises with age, and the elderly are most likely to report a disability. For example, among people age 70 and over, reported difficulties with an IADL is over 16 times higher than for those age 18 to 24 (21.7 versus 1.3 percent).

A larger share of the adult population reports a physical impairment relative to a sensory or mental impairment. Among the working age population, the prevalence rates for those who reported a mental, physical, or sensory condition are 3.2, 13.8, and 4.8

[17] Some caution has to be used in examining these prevalence rates because some persons in this age category, and especially the 65 and older category, are retired, which might influence their response to this question. See Wittenburg, Stapleton and Scrivner (2000) for more details.

percent, respectively. The prevalence of physical and sensory impairments generally increases with age, while mental difficulties are generally evenly distributed among adults age 18 and 70.[18] Among youth, 7.8 percent report a mental impairment (though the questions for youth differ somewhat from those for adults), and relatively few report a sensory limitation (2.5 percent).

However, these data cannot necessarily be interpreted as the true prevalence of specific conditions in the general population because the information that can be used to assess the wide range of disabling conditions is limited in the SIPP. For example, the battery of questions through which sensory and mental impairments are identified is generally limited, so SIPP-based estimates of the prevalence of these conditions are likely to be understated, particularly relative to physical conditions.

Demographic differences across disability conceptualizations for working-age adults (25 to 61 years) can have important implications for policy analysis (Table 5). Relative to those without disabilities, respondents in each of the six disability categories are more likely to be older, nonwhite, and have fewer years of education. With the exception of people who report a sensory impairment, respondents with disabilities are more likely to include women relative to those without disabilities.

Across disability conceptualizations, the ADL, IADL, and physical limitation conceptualizations include a higher concentration of female respondents (at least 57 percent in each category) relative to those with work limitations, mental impairments, and sensory impairments. Additionally, respondents who report an impairment (mental, physical or sensory) have generally higher rates of education completion relative to those with functional or participation restrictions.

There are also some overlaps across disability definitions (see Appendix C). For example, over 80 percent of those who report an ADL or IADL also report a work limitation. These overlaps are important to consider when conducting a subgroup analysis within a particular conceptualization or, alternatively, when combining multiple

[18] Reported mental impairments increase for those over 70 relative to other adults.

definitions to create a composite measure of disability (similar to the any disability measure used in this paper).

While the size of the SIPP sample is generally large enough to support estimates of disability prevalence for the entire population of people with disabilities and for several subgroups, the descriptive statistics in Table 5 suggest that the SIPP is limited in the extent to which it can support an analysis of very small subpopulations of people with disabilities, such as Native Americans. As illustrated in Appendix B, the standard error estimates for these small groups are especially high, which reflects the fact that the size of the sample for these groups is small overall. Consequently, researchers should interpret estimates for very small subpopulations cautiously, as the figures may not be as precise as they would be if they were based on a larger sample.

Table 6 presents employment rates for working-age adults across the disability conceptualizations for different employment definitions and demographic groups. These employment definitions allow work activities to be broken down into full- and part-time status, the latter being more prevalent among people with disabilities.[19] Because employment varies by demographic characteristics, additional employment data are presented by gender, age, race, ethnicity, and education.

The employment rates for people with disabilities are lower than the rates for people without disabilities, and the rates vary across definitions. Compared to people without a disability, people who report any disability are much less likely to be employed (48.9 versus 82.4 percent). Across the disability definitions, the employment rates for those who report an impairment are relatively higher than the rates for those with an activity limitation and or a participation restriction. For example, among people with physical or sensory impairments, 46.4 and 53.5 percent, respectively, are employed. By

[19] As noted in Table 3, the employment definitions include employment during the reference period, which is defined as any employment in May 2002, sometime in the previous year (at least 52 hours between June 2001 and May 2002) and full-time in the previous year (at least 35 hours per week and 50 weeks or more during the previous year).

comparison, among those who report a work limitation, an ADL, or an IADL, employment rates are 27.7, 20.3, and 22.8 percent, respectively.

Table 6 also illustrates the relatively high rates of part-time or part-year work among people with disabilities. For example, while only 31.2 percent of those who report one of the limitations from our six disability measures work full-time during the year, 61.1 percent work either part-year or part-time.

Like employment rates for people without disabilities, employment rates vary by demographic characteristics within each of the disability conceptualizations. Across all groups, males, those who are white, and those with higher education levels have relatively higher monthly and annual employment rates relative to their counterparts.

Table 7 presents statistics on the annual economic well-being of working-age adults across multiple measures. The percentage below poverty level illustrates the number of people in a particular group living below poverty. The mean income-to-needs ratio expresses average family income adjusted for family size. For example, an individual with an income-to-needs ratio of 2.0 is in a family whose income is 200 percent of the poverty level. The median income-to-needs ratio in the next row illustrates the distribution of incomes. Finally, the mean and the median family income is an indication of overall family income, which is not adjusted for family size.

Across all measures, people with disabilities are more likely than people without disabilities to live in a low-income family, and the average income of those with and without disabilities varies significantly across demographic groups. People who report a work limitation or an IADL are more likely to be living in poverty (approximately 26 percent each) and to have the lowest mean income-to-needs ratio (250 percent of poverty) and mean family income (approximately $35,000 each). By comparison, only 6.5 percent of people without disabilities live in a family below the poverty line. Like the statistics on employment, those on economic well-being indicate that, across all disability categories, men, those who are white, and those with more education are more likely to live in a higher-income family.

Longitudinal Estimates

The SIPP's primary advantage for disability research is that it can be used to track longitudinal changes in characteristics and outcomes. For example, the data can be used to build multi-period measures of health status to capture the characteristics of and outcomes for people with longer-term disabilities. In addition, changes in work and income can be tracked over time for a cohort. The tables below present transitions over a one-year period. Additional tables are in Appendix C show quarterly changes for readers interested in shorter-term fluctuations in health, employment, and program participation status for those with work limitations.

Table 8 presents estimates of changes in the health, employment, and program participation status for people who reported a work limitation (in wave 5) and who reported a work limitation one year later (i.e., in wave 8). The first section of the table shows sample sizes and population estimates. The section titled "changes in work limitation status" shows that 75.6 percent of people who reported a work limitation in wave 5 also reported a work limitation one year later. These results suggest that approximately three-quarters of the population with a work limitation are composed of people with a limitation that persists for more than one year. The next section shows that 3.2 percent of those without a work limitation in wave 5 reported that they have a work limitation one year later. While a relatively small percent, this estimate actually represents a large number of people (approximately 3.6 million people), as the total population without disabilities is very large. Hence, there are a relatively large number of people who experience either a short or long-term disability throughout the course of the year. Nonetheless, this population is still much smaller than the overall base of all people with disabilities (approximately 12 million people).

Employment status and program participation also change throughout the course of the year, which partly reflects the changing health status of the population with disabilities. For example, the next section of Table 8 shows that 28 percent of those who report a work limitation were working in May 2002, and 22 percent reported working in May 2003 (i.e., 78 percent of workers with a limitation who were working in May 2002

were also working a year later). Similarly, 72 percent of workers with a limitation were not employed in May 2002, and 65.9 percent were not employed one year later in May 2003. Program participation in Temporary Assistance for Needy Families (TANF), General Assistance (GA), and Supplemental Security Income (SSI) also varied through the year, as 24.2 percent of people with work limitations received benefits from at least one of these programs in May 2002, and 19.7 percent received benefits from at least one of these programs one year later in May 2003. Similarly, 75.8 percent of people with work limitations did not receive benefits from these programs in May 2002, and 71.6 percent were not receiving these benefits 12 months later in May 2003. These data are helpful in understanding the dynamics behind some of the program and employment characteristics of people with disabilities over the course of the year, though more rigorous analyses is necessary to further explore the dynamics of these changes, especially among certain subpopulations who report work limitations.

Table 9 presents a more detailed breakdown of health status based on responses from waves 2 and 5. By focusing on the outcome information in wave 5, we can use the information in the Functional Limitation and Disability topical module in the interview wave to examine differences in health characteristics across waves for specific subgroups. This type of analysis is particularly important in differentiating between those who have shorter- and those who have longer-term disabilities. For example, the longer-term statistics may be more useful to researchers interested in examining the relationship between work limitation status and SSA's permanent disability programs, whereas the shorter-term statistics may be more useful to researchers interested in examining the effect of disability onset on, say, earnings.

The descriptive statistics in Table 9 suggest that there are important differences between subgroups of people with long- and short-term work limitations that influence health, employment and economic outcomes. The four subgroups include those who report no work limitation in any period; those who report work limitations in wave 2, but not wave 5; those who report work limitations in wave 5, but not wave 2; and those who report work limitations in waves 2 and 5. These groups presumably represent a range of work-limitation status, with those in group 1 having no limitations and those in group 4

having longer-term limitations. Respondents in group 2 had a disability in wave 5 but have presumably recovered, while those in group 3 had a disability onset in the most recent wave. As shown in the table, those with much longer-term disabilities have the highest reported health problems and lowest employment rates, while those without any limitations in any period are much better off across all categories. For example, those who report a work limitation in both periods (group 4) are much more likely to report fair/poor health, an IADL, an ADL, or any type of impairment; and they are less likely to be employed relative to all other groups.

While the availability of longitudinal data is one of the SIPP's strong points, researchers must use some caution in comparing the reported prevalence of work limitations in wave 1 to other waves. As noted earlier, the placement of the work-limitation question changes from wave 1 to wave 2 because the nature of the questions on employment change from wave 1 to wave 2 but remains the same for all ensuing waves.

The potential pitfalls of using information on work-limitation status from each interview wave are illustrated in Table 10, which shows that the reported prevalence in wave 1 is much higher than in all other waves (e.g., 11.8 percent in wave 1 versus 10.3 percent in wave 2). However, the placement of the work-limitation question after the wave 2 interview is the same and, not surprisingly, the reported prevalence from wave 2 to wave 9 is generally similar (though there is some variation, ranging from 10.0 percent in wave 4 to 10.7 percent in wave 3).

Restricted Access Matched SIPP-SSA Administrative Records

The Census Bureau in collaboration with the Social Security Administration has linked several panels of SIPP survey data to Social Security Administrative records on program and earnings that are available on a restricted basis. During each in SIPP panel, the Census Bureau collects information on Social Security Numbers that are used as a basis for the linkage. The restricted linked files include all SIPP panel data on historical information on Disability Insurance (DI) and Supplemental Security Income (SSI)

program participation, as well as summary earnings information from Social Security Administrative records. [20] Researchers have used the matched data in longitudinal studies of earnings and program participation beyond the timeframe covered in each SIPP interview (Rupp and Davies 2004; Stapleton et al. 2002; Stapleton, Wittenburg, and Maag 2005).

To date, matched files have been created for the 1984, 1990, 1991, 1992, 1993, 1996, and 2001 panels, and there are plans to match the 2004 panel when it becomes available. However, because more than the usual number of people refused to provide their SSNs in the 2001 SIPP panel, the match rate of SSNs to SIPP sample members is much lower than previous SIPP panels.[21] Researchers can apply for access to the restricted files through Census's Center for Economic Studies program at http://www.ces.census.gov/.

The primary advantage of the matched data is that they provide information on the entire history of SSA-covered earnings and on SSI and DI program participation for nationally representative samples. Hence, researchers can use these data to observe in detail the transitions of SIPP respondents before, during, and after their SIPP interviews. While transitions onto SSI can be observed in SSA administrative data alone, the combination of survey and administrative data provides a detailed picture of the characteristics of SSI applicants and recipients—such as family, health, labor market, and program participation information (e.g., TANF)—that is not possible with administrative data alone.

Table 11 includes descriptive information on trends in program participation and earnings of people with and without work limitations who were working during their first

[20] As part of the ongoing SIPP program, the Census and SSA validate SSNs for SIPP sample members in the course of normal survey operations. An attempt is also made to locate SSNs for persons for whom an SSN is not reported in the survey (except for persons refusing to provide their SSN). According to Hu, et al. (2001), in the 1990 panel this process resulted in a "validated" SSN for approximately 90 percent of original sample members age 18 or older and for about 80 percent of persons under the age of 18.

[21] Preliminary estimates suggest that the match rate for the 2001 panel is approximately 65 percent, in comparison to earlier panels, which had a match rate of approximately 85 to 90 percent (Davies 2005).

interview for the 1990, 1991, 1992, and 1993 SIPP panels. The table is based on linked administrative data from Stapleton, Wittenburg, and Maag (2005),[22] who pooled data from these panels to increase the sample size for transitions and to examine transitions into SSI and DI as well as entries into and exits from the labor market. They identified workers as those for whom Social Security earnings were reported for their base year (i.e., earnings appeared in SSA's administrative earnings files) but who did not receive SSA disability benefits, according to SSA's program records for SSI and DI.

"Employment exits and re-entries" and "program entries and exits" were identified solely from the administrative data. A respondent was defined as being employed during a calendar year if, and only if, he or she had earnings in that year. An exit was defined as a change from positive calendar year earnings to zero in the following year, and re-entry was defined as the opposite. Similarly, program entry (exit) was marked by a change in DI or SSI benefits from zero to positive (positive to zero) during a year.

Stapleton, Wittenburg, and Maag's analysis showed that there are important differences in earnings and program participation between people with and without disabilities before, during, and after their SIPP interviews. For instance, workers with disabilities (regardless of gender) were less likely to be employed than their counterparts without disabilities in the five years leading up to the interview. In the year after the first SIPP interview, workers with disabilities experienced a sharper employment decline relative to those without disabilities, and a large gap between the two groups emerged by the fifth year after the interview. Additionally, very few employed workers in these panels had participated in DI or SSI before their base year, though participation did increase in the five years following their first SIPP interview. Program participation for workers with disabilities grew substantially in the five years after the base year—to approximately 12 percent, compared to about 2 percent for those without disabilities. This analysis suggests that, although many people with disabilities who were not

[22] Stapleton, Wittenburg and Maag (2005) also present analyses to examine specific transitions following business cycle changes that use more complex multivariate analyses.

employed in the fifth year had entered one of the disability programs, a substantial share had not.

Comparisons to Other Data Sources

Because disability is not a uniformly defined concept that can easily be observed and measured through surveys, it is important to understand how SIPP-based disability estimates compare to other national survey estimates. As discussed, the type of question and even the placement of questions influence disability prevalence rates regardless of how disability is defined. Consequently, a comparison between estimates gives us some way to gauge whether certain measures in the SIPP produce higher or lower prevalence rates relative to other data sources, which might in turn influence observed outcomes, such as employment.

These data sources include the 2003 American Community Survey, the 2000 Census, the March 2004 Current Population Survey (CPS), the 2002 National Health Interview Survey (NHIS), and the 2001 Panel Survey of Income Dynamics (PSID), all of which are part of the Cornell Stats RRTC User Guide series from calendar years 2001 through 2003.[23] With the exception of the SIPP, the CPS, and the 2000 Census, the year associated with each dataset represents the actual year that the survey was administered. The 2000 Census and the March 2004 CPS collected annual income and annual labor supply information for the previous calendar year (1999 and 2003, respectively) and reference period information on disability prevalence and current employment during the current calendar year (2000 and 2004, respectively). The SIPP estimates presented here correspond to the data collected during wave 5, which represent the 2002 calendar year. Details on the methods used to collect information on people with disabilities in each of these surveys appear in the corresponding Cornell Stats RRTC User Guides. The following discussion addresses the similarities and differences between data sources, and the tables provides more detailed comparisons for interested readers.

[23] The Cornell series also includes other data sources, such as the 1994 NHIS-D, though they are not collected during a comparable time period, and hence are not included here.

Differences in estimates may be related to differences in the population over time. The survey year is therefore an important consideration when comparing estimates based on two or more surveys. We attempted to choose similar time frames in selecting these data sources, though there are some notable differences. The 2000 Decennial Census Long Form, for example, is representative of the year 2000. Because changes in the population, the labor market, and the economic environment from 2000 through 2003 can affect population estimates, prevalence estimates, employment estimates and economic well-being estimates, the 2000 Census data and the March 2004 CPS are not necessarily comparable. Therefore, some caution must be used in making conclusions based on data sources from different time periods.

Each comparison table defines disability as the presence of a participation restriction, an activity limitation, or impairment. Some datasets—the CPS, for example—are limited insofar as disability is defined only as an activity limitation. This is evident in the table columns that identify the ICF disability concepts. An "NA" entry indicates that information on the particular ICF concept is not present in the survey. Further, for some of the comparisons, such as employment, the population is further restricted to the working age population.

Population and Prevalence Estimates

The SIPP population and prevalence estimates are generally higher than estimates from other data sources that have a smaller set of questions, especially the CPS and Census 2000. Table 12 shows the differences between surveys in the size of the population with disabilities, and Table 13 presents overall prevalence rates in the adult population. The differences in the number of questions lead to differences in prevalence rates from one period to the next. For example, according to the CPS, which defines disability as a work limitation (i.e., the only question related to disability is expressed in terms of a work limitation), the number of working age adults (age 25-61) with a disability is 12.1 million, whereas according to the SIPP, which has a battery of questions on disability status, includes 26.6 million people with a disabilities, 14.4 million of whom reported a work limitation. The difference between the CPS- and the SIPP-based

estimates underscores the importance of clearly defining disability, which, in this case, is tied not only to the number of questions that go to the issue of disability but also to the terms in which these questions are framed. Both can significantly raise or lower the number of people with disabilities in an analysis sample.

The NHIS is the most comparable to the SIPP in terms of the number of questions on disability, including questions that cover each of the six categories.[24] However, SIPP prevalence estimates in each category are, for all age groups, slightly higher than the NHIS estimates, which might reflect both the nature and the position of the questions. The estimated prevalence rates in the two data sets are generally very close for the work limitation question (10.1 percent in SIPP versus 9.9 percent in the NHIS), but there are differences in other categories in which there is some variation in the questions (e.g., 13.2 percent in the SIPP versus 10.5 percent in the NHIS).

In each disability category, there is some variation in prevalence rates across surveys. The SIPP continues to produce higher prevalence rates relative to the ACS, the CPS, and the Census 2000, which might reflect the fact that the larger battery of questions in the SIPP prompt more responses related to disability. The SIPP prevalence rates are also relatively similar to the NHIS rates. However, the PSID-based estimates of disability prevalence are the highest of all, when disability is defined as a work limitation. For example, according to the PSID, over 20 million people have a work limitation (Table 12), which represents a prevalence rate of 14.6 percent (Table 13). By comparison, the respective SIPP estimates for the same population are 14.1 million people (Table 12) and a prevalence rate of 10.1 percent (Table 13). These results suggest that even similar definitions of disability can produce different estimates, thus underscoring the importance of recognizing the implications of using different measures *and* data sources in disability-related analyses.

[24] Overall prevalence rates for any disability range from 3.0 percent (CPS) to 8.9 percent, though, as noted above, these numbers largely reflect differences in the number of questions available across data sources to measure disability.

Employment Rates

Table 14 presents employment estimates across the available disability measures. The employment measures include (1) reference period, the most recent employment (2) some attachment, which indicates some employment over a one-year period, and (3) full time, which obviously indicates full employment over an entire year. Not surprisingly, the employment rates for each measure are very different from one another, as people with disabilities are more likely to report some attachment to the labor force relative to full-time or reference period. In addition, like the SIPP-based rates, employment rates in the other surveys vary across disability conceptualizations, as those who have participation restrictions and activity limitations report lower employment rates relative to those with impairments. Across all surveys and disability measures, people with sensory impairments report the highest levels of employment among those with disabilities.

Compared with other surveys, reported employment rates in the SIPP are higher than in the ACS, CPS, and the Census 2000; approximately equal to the NHIS-based rates, and lower than the PSID-based rates. For example, among those with work limitations, SIPP reference period employment rate is 27.7 percent, the ACS and CPS employment rates for the same measure are 18.9 percent and 19.6 percent, respectively), the NHIS rate is 29.8 percent, and the PSID rate is 53.2 percent.

In interpreting these results, however, it is important to note the differences in prevalence rates within each disability category from Tables 12 and 13. The anticipated employment rates *within similar disability conceptualization categories* (e.g., participation restrictions) would likely be higher in surveys that captured broader and, presumably, less severely disabled, populations within these categories. Because the SIPP generally has higher prevalence rates within these categories, especially relative to the CPS and the ACS, the employment trends are what we would expect them to be. Similarly, because the PSID captures a much larger population with work limitations, it is not surprising that the employment rates observed in that survey are higher relative to other surveys. Finally, it is also important to note that we expect to see differences in

reported annual employment in the SIPP relative to other surveys because the SIPP annual employment measure is constructed on the basis of responses to many questions during a year, whereas the other surveys have one retrospective question on employment for the full year.

As illustrated by the estimates for people without disabilities, the effect of this difference in survey design is that we observe a higher prevalence of some attachment to the labor force in the SIPP but a lower prevalence of full-time employment (which is based on a much stricter definition of employment). Westat and Mathematica (2001) found that there were similar differences in employment for other demographic groups and that these differences are likely related to differences in survey design.

Economic Well-Being

Table 15 presents estimates of economic well-being that are based on a poverty threshold. These rates were calculated on the basis of total income amounts from each survey, which were then adjusted for family size and compared to poverty thresholds.[25]

In all surveys and disability categories, people without disabilities are less likely to live in poverty than are those with disabilities. The poverty rates for those with work limitations in the SIPP are slightly lower than they are the CPS and ACS, which is consistent with the employment differences noted above. Compared to the NHIS, the incidence of poverty in all disability categories is lower in the SIPP, which might be partly a result of the limited number of income questions in the NHIS. Finally, the prevalence of poverty is lowest in the PSID, which might reflect the fact that, relative to the other surveys, the PSID captures a broader population.

[25] In the ACS, a family measure is computed and the income measure is then adjusted for the number of people in the family and compared to the poverty line.

Conclusions

The cross-sectional data in the SIPP confirm trends in other data sources that show that people with disabilities generally have lower rates of employment and economic well-being than do people without disabilities. The longitudinal estimates indicate that the population identified with a disability is not homogenous, as it includes people with short- and long-term disabilities. Further, the matched SIPP-SSA data show that there are long-term differences in people with and without disabilities with regard to employment and program participation.

These findings suggest that the SIPP has several advantages for disability research. First, it contains a large set of questions on health and disability status that researchers can use to construct a variety of disability measures. As shown in the tables, these measures can produce very different prevalence, employment, and poverty rates for different populations. Consequently, it is important for researchers to develop a definition of disability on the basis of a theoretical conceptualization of disability that is congruent with the objectives of their analysis. For example, researchers interested in exploring disability as it is defined in the ADA and the New Freedom Initiative should likely rely on a broad set of disability measures. In contrast, those interested in exploring disability as it relates to eligibility for SSI and/or DI should use a longer-term definition, such as a limitation in two consecutive periods.

The second advantage of using the SIPP in disability analysis is that it includes a large nationally representative sample of people in the noninstitutionalized population and a comprehensive battery of questions. As a result, researchers can construct analysis samples of people with disabilities to test the sensitivity of their results. Analyses on multiple populations are particularly important, given that our descriptive findings illustrate the sensitivity of outcomes to different disability conceptualizations.

Third, the SIPP is suitable for disability analysis because its detailed longitudinal information on health, employment, income, and program participation that can be used not only to track changes in these variables over approximately 2.5 to 4 years, depending

on the panel. Moreover, the data can be used to examine how changes in health affect employment and economic well-being over the course of a year.

Finally, researchers can combine information from the SIPP with SSA administrative data on program participation and earnings to examine changes in earnings and program participation before, during, and after each SIPP panel. This type of analysis in particular is for researchers interested in examining longer-term trends in earnings and program dynamics among people with disabilities.

Despite these advantages, the SIPP is also limited in the extent to which it can support other types of disability analyses. The most pronounced drawback has to do with cross-panel and within-panel comparisons based on the work limitation question. Because the SIPP is essentially a longitudinal panel, its usefulness in producing trend estimates is limited, particularly relative to exclusively cross-sectional surveys such as the CPS and the NHIS. In addition, prevalence rates of work limitations across interview waves change because of changes in the position of the question. Finally, attrition bias in the SIPP is significant, especially from wave 1 to wave 2, and must therefore be accounted for in any SIPP-based analysis.

These findings are the basis for the following general recommendations on using the work limitation questions: [26]

- *Comparisons Across Panels.* We urge caution in making comparisons across panels. If such comparisons are necessary, we suggest that the trends in prevalence rates in first interview from each panel should be compared with trends in other data sources. The

[26] It is important to note that while these issues are important for producing comparable estimates across panels or interviews, they do not necessarily prohibit researchers from developing other cross-sectional or longitudinal disability conceptualizations for other analyses. For example, researchers interested in outcomes for people with longer-term disabilities could use two-period work limitation definitions to identify a sample of respondents within the SIPP. This definition could be used to produce disability estimates under a longer-term definition of a participation restriction under the ICF conceptual model. However, if comparisons are made to other definitions, such as single period definitions or two period definitions in other interviews, researchers should ensure that the audience understands the impact of the changes in interviews on overall observed prevalence.

changes in the 1996 panel redesign has important implications for the observed prevalence of disability, as the question for work limitations was moved to a different part of the survey.

- *Comparisons Within Panels.* With respect to the pre-1996 panels, we do not recommend comparisons between earlier and later interviews as respondents are reminded of their answers. With respect to the 1996 and 2001 panels, we do not recommend comparisons between waves 1 and 2 because of the change in the position of the question, which will influence the observed disability prevalence from on interview to another. However, the position of the question is the same in the second and all subsequent interviews in the post-1996 panels, suggesting that within-panel comparisons between them would produce comparable results.

In summary, the SIPP remains an important source of data for disability research, albeit the need for some caution in generating disability prevalence estimates for different measures. As noted, some measures change within panels that might influence prevalence rates. Furthermore, other measures, especially very specific impairment measures that could change with an accommodation, might be less reliable for defining specific disability definitions. Consequently, in selecting disability measures in the SIPP, researchers should ensure that the measure conforms to a certain disability conceptualization and that it is defined consistently across interview waves and, when applicable, across panels as well.

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Tables

Table 1. 1984-2001 SIPP Panel Summary Information

Panel	First Interview	Last Interview	Interviews	Number of Wave 1 Eligible Households	Interview Mode	Data Collection
1984	Oct-83	Jul-86	9	20,897	In-person	Paper
1985	Feb-85	Aug-87	8	14,306	In-person	Paper
1986	Feb-86	Apr-88	7	12,425	In-person	Paper
1987	Feb-87	May-89	7	12,527	In-person	Paper
1988	Feb-88	Jan-90	6	12,725	In-person	Paper
1989	Feb-89	Jan-90	3	12,867	In-person	Paper
1990	Feb-90	Sep-92	8	23,627	In-person	Paper
1991	Feb-91	Sep-93	8	15,626	In-person/ Telephone	Paper
1992	Feb-92	May-95	10	21,577	In-person/ Telephone*	Paper
1993	Feb-93	Jan-95	9	21,823	In-person/ Telephone	Paper
1996	Apr-96	Mar-00	12	40,188	In-person / Telephone	Computer Assisted Interviewing
2001	Feb-01	Jan-04	9	36,700	In-person / Telephone	Computer Assisted Interviewing

Source: Westat and Mathematica Policy Research (2001).

Note: Panels were stopped in 1994 and 1995. A 2000 panel was introduced in February 2000 for two waves, but it was cancelled. The Census is currently in the field with the 2004 SIPP panel, though data are not yet available.
*Beginning in February 1992, the Census switched to maximum telephone interviewing to reduce cost. The wave 1 and 2 interviews were conducted by face-to-face interviews as before, but interviews at subsequent waves were conducted by telephone to the extent possible. Census conducted in-person interviews during the first, second, and sixth interview of the 1992 panel.

Table 2. Summary of Selected Topical Modules that Contain Detailed Health Information from the 1984-2001 SIPP Panels

Interview and Timing	Brief Description
Core Files Every SIPP Interview	During the first interview of every panel, asks questions regarding respondent's work limitation. Starting in 1996, this question was asked in every interview wave.[1]
Functional Limitations and Disability 1990 Waves 3 and 6 1991 Wave 3 1992 Waves 6 and 9 1993 Waves 3 and 6 1996 Waves 5 and 11 2001 Waves 5 and 8	Includes questions for adults and children, though it was significantly updated in 1996. Adults are asked several Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) battery of questions. Several additional questions are asked on physical and mental conditions affecting the respondents, their use of specific accommodations (e.g., vision, hearing and mobility), and difficulties in other functional domains. For those under age 22, the questions are modified, referring to age-appropriate activities (e.g., questions about work activities are recast to ask about analogous school activities). The Census added several new questions to this Topical Module on specific health conditions following the 1996 SIPP redesign.
Work Disability History 1986- 1993, 1996, 2001: Wave 2	Includes a series of questions about chronic health conditions that may affect the amount or type of work a respondent can do. It also includes questions about the conditions causing the disability, the last time the respondent worked before they became limited, and how much the respondent worked.
Medical Expense and Work Disability 1987, 1990, 1992: Wave 7 1993: Waves 4 and 7 1988, 1991: Wave 4 1996: Wave 3, 6, 9, 12 2001: Waves 3, 6, 9	Includes questions regarding medical expenses and work prevention. The Census added several new data elements and increased the frequency of this Topical Module following the redesign in 1996.
Health and Disability/Health Status and Utilization of Health Services[2] 1984, 1986, 1988- 1989: Wave 3 1985, 1987: Wave 6	Includes questions about a person's basic health and limitations in daily living. Also includes basic information on health care utilization. These modules were dropped after the 1989 SIPP panel after the Census added the Functional Limitations and Disability Topical Module, which includes a more expansive list of disability variables (see above).

[1] As noted in Maag, Weathers and Wittenburg (2005), the placement of the work limitation question starting in 1996 in interview 1 differs slightly from all subsequent interviews, which has important implications for making comparisons from wave 1 to all subsequent waves. Prior to 1996, subsequent questions on work limitations were asked in TMs. However, respondents in pre-1996 SIPP panels were reminded of their answers to work limitation questions in these earlier panels, which lead to higher rates of work limitation prevalence in later waves of each panel (as respondents are reminded of their answers) relative to the first wave.

[2] The 1984 SIPP panel is the only SIPP panel that included a Health and Disability Topical Module. The Health Status and Utilization of Health Services that appeared in subsequent SIPP panels included similar questions to those in the 1984 Health and Disability Topical Module.

Table 3. Summary Data Definitions for Descriptive Analysis[1]

Disability Terms	Definitions
Participation Restrictions	
School or Work Limitations	Includes respondents 18-69 years old who reported a physical, mental, or other health condition that limits the kind or amount of work they can do, and respondents 6-17 years old who reported a physical, learning, or mental condition that limits their ability to do regular schoolwork.
IADLs	Includes respondents over age 14 who reported difficulties with activities such as going outside the home, keeping track of money or bills, doing light housework, and taking medication.
Activity Limitation	
ADLs	Includes respondents over age 5 who reported difficulty with activities such as getting around inside the home, getting in and out of bed or a chair, taking a bath or shower, dressing eating, or using the toilet.
Impairment	
Mental	For respondents over age 5, this disability category includes reports of learning or developmental disabilities, and mental retardation. For 6 to 14 year olds, this also includes reports of Attention Deficit Hyperactivity Disorder (ADHD) and developmental conditions for which the child has received therapy or diagnostic services. For respondents over age 14, this indicator also includes reports of Alzheimer's disease or other serious problems with confusion or forgetfulness, and other mental or emotional conditions.
Physical	Includes respondents over age 14 who report difficulty with lifting or carrying an object 10 pounds or heavier, pushing or pulling large objects, standing or sitting for one hour, stooping, crouching, or kneeling, reaching or grasping, walking three blocks or up a flight of stairs, or using a telephone.
Sensory	Includes respondents over age 5 who report difficulties with seeing, hearing, or having their speech understood.
Any Disability	
Any Participation Restriction, Activity Limitation, or Impairment	For 6 to 69 year olds, this includes respondents who reported at least one condition within any of the 6 disability categories described above. For respondents over 69, any disability is coded as at least one condition in all of the categories described above with the exception of a participation restriction (work limitation).

Continued

Table 3 (continued). Summary Data Definitions for Descriptive Analysis

Economic Well-Being Terms	Definitions
Family Income	Family income is an annual measure over the period June 2001 through May 2002 and is annualized for respondents who were not present in all of those 12 months. The Census Bureau definition of family includes all persons related by blood, marriage, or through adoption.
Percent Below Poverty Line	This indicator represents the proportion of respondents with annual income (over the period June 2001 through May 2002) below the poverty threshold (averaged over the 12 month period since the poverty thresholds change month to month depending on the family size during the month).
Income to Needs Ratio	This indicator represents the ratio of annual family income to the average poverty threshold over the period June 2001 through May 2002.
Employment Terms	
Employed in Reference Period	This indicator represents respondents with any earnings during the reference period. For Tables 6 and 14 the reference period is May 2002, the month during Wave 5 for which all respondents were interviewed. For Table 8, the two time periods are May 2002 and May 2003.
Employed Sometime in Previous Year	This measure represents respondents who reported working 52 or more hours during the period June 2001 through May 2002.
Employed Full-time in Previous Year	This measure represents respondents who reported working an average of 35 or more hours per week across all jobs during the time period June 2001 through May 2002 and who worked 50 or more weeks during those 12 months.

[1] The timeframes for all descriptive analyses are noted in each table. Appendix A includes detailed definitions for the construction of these variables, as well as additional variables.

Table 4. Population and Prevalence Estimates by Disability Concept

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the disabilities	School/Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
Summary								
Ages 6 and Older								
Population Estimate	226,100,000	56,750,000	NA	NA	NA	NA	NA	NA
Prevalence Rate	79.9	20.1	NA	NA	NA	NA	NA	NA
Sample Size	54,989	14,424	NA	NA	NA	NA	NA	NA
Age 6-17								
Population Estimate	43,760,000	5,637,855	3,756,662	NA	288,369	3,872,444	NA	1,251,383
Prevalence Rate	88.6	11.4	7.6	NA	0.6	7.8	NA	2.5
Sample Size	11,363	1,525	1,031	NA	41	1,046	NA	342
Age 18 to 69								
Population Estimate	149,793,764	35,971,617	19,176,904	6,803,193	4,577,061	5,942,158	25,686,077	8,826,362
Prevalence Rate	80.6	19.4	10.3	3.7	2.5	3.2	13.8	4.8
Sample Size	35,380	9,004	4,883	1,741	1,169	1,491	6,434	2,223
Ages 70 and older								
Population Estimate	9,249,957	15,030,000	NA	5,280,742	3,448,550	1,418,021	14,040,000	5,789,635
Prevalence Rate	38.1	61.9	NA	21.7	14.2	5.8	57.8	23.8
Sample Size	2,322	3,862	NA	1,366	892	362	3,613	1,499
Detailed Age Breakdowns								
Ages 18 to 24								
Population Estimate	24,820,000	2,426,337	1,209,819	366,058	146,005	1,076,818	982,502	533,783
Prevalence Rate	91.1	8.9	4.4	1.3	0.5	4.0	3.6	2.0
Sample Size	5,833	601	302	91	37	270	248	130

Continued

Table 4 (continued). Population and Prevalence Estimates by Disability Concept

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the disabilities	School/Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
Detailed Age Breakdowns								
Ages 25 to 61								
Population Estimate	115,900,000	26,620,000	14,420,000	4,931,252	3,362,523	4,394,330	18,790,000	6,490,202
Prevalence Rate	81.3	18.7	10.1	3.5	2.4	3.1	13.2	4.6
Sample Size	27,358	6,621	3,645	1,245	849	1,093	4,666	1,624
Ages 62 to 64								
Population Estimate	3,958,795	2,581,533	1,496,505	567,581	376,607	252,092	2,165,922	672,006
Prevalence Rate	60.5	39.5	22.9	8.7	5.8	3.9	33.1	10.3
Sample Size	928	647	384	146	96	65	537	169
Ages 65 to 69								
Population Estimate	5,114,969	4,343,747	2,050,580	938,302	691,926	218,918	3,747,653	1,130,371
Prevalence Rate	54.1	45.9	21.7	9.9	7.3	2.3	39.6	12.0
Sample Size	1,261	1,135	552	259	187	63	983	300
Ages 65 and older								
Population Estimate	14,364,926	19,373,747	NA	6,219,044	4,140,476	1,636,939	17,787,653	6,920,006
Prevalence Rate	42.6	57.4	NA	18.4	12.3	4.9	52.7	20.5
Sample Size	3,583	4,997	NA	1,625	1,079	425	4,596	1,799

Source: 2001 SIPP wave 5 Functional Limitations and Disability TM

Standard Errors for this Table are in Appendix Table B1

Table 5. Demographic Characteristics by Component of Disability, Ages 25-61

		Disability	Participation Restriction		Activity Limitation	Impairment		
Characteristic	**No Disability**	**At least 1 of the 6**	**Work Limitation**	**IADLs**	**ADLs**	**Mental**	**Physical**	**Sensory**
Total prevalence	81.3	18.7	10.1	3.5	2.4	3.1	13.2	4.6
Age								
% 25 to 34	30.0	15.2	13.8	13.1	10.3	24.9	12.5	13.4
% 35 to 44	32.3	25.3	25.3	24.3	22.3	32.0	23.6	22.2
% 45 to 54	26.2	35.4	35.8	36.4	39.8	30.5	36.8	38.4
% 55 to 61	11.6	24.1	25.2	26.2	27.7	12.6	27.1	26.0
Gender								
% Male	50.3	44.1	47.9	42.7	42.7	49.9	38.5	51.6
% Female	49.7	55.9	52.1	57.3	57.4	50.1	61.5	48.5
Race								
% Asian	4.7	2.8	2.1	2.5	2.2	1.9	2.7	3.6
% Black	11.2	15.0	18.2	18.2	19.6	15.3	15.1	13.6
% Native American	1.2	1.7	1.7	1.8	1.5	2.5	1.7	2.1
% White	83.0	80.6	78.0	77.5	76.7	80.4	80.6	80.6
Ethnicity								
% Hispanic	12.5	11.5	11.1	12.3	11.2	10.4	11.0	12.5
Education								
% Less than High School	8.7	18.8	24.1	24.6	22.5	25.6	19.0	20.9
% High School/GED	29.5	35.3	37.9	36.5	36.1	33.6	34.5	34.5
% Some College	30.1	30.1	27.3	28.9	30.7	26.8	30.7	30.0
% Four Year College Graduate or more	31.7	15.9	10.7	10.0	10.7	14.0	15.8	14.6

Source: 2001 SIPP wave 5 Functional Limitations and Disability TM
Standard Errors for this Table are in Appendix Table B2

Table 6. Employment Rates, Ages 25 to 61

% Employed During…	No Disability	Disability: At least 1 of the 6	Participation Restriction: Work Limitation	Activity Limitation: IADLs	Activity Limitation: ADLs	Impairments: Mental	Impairments: Physical	Impairments: Sensory
All								
Reference Period (any earnings May 2002)	82.4	48.9	27.7	20.3	22.8	37.0	46.4	53.5
Sometime in Previous Year (52 hours or more in year)	90.6	61.1	41.0	34.1	38.8	46.3	59.0	63.7
Full-Time in Previous Year (35 hours or more and 50 weeks or more)	58.1	31.2	15.3	12.0	15.0	20.3	29.6	35.6
Men								
Reference Period	89.9	51.2	29.7	21.0	23.8	40.2	46.5	59.0
Sometime in Previous Year	96.9	63.9	43.7	36.3	40.2	49.4	60.1	68.5
Full-Time in Previous Year	69.0	35.5	18.2	14.6	17.3	23.7	32.5	42.3
Women								
Reference Period	74.8	47.1	25.9	19.8	22.0	33.9	46.4	47.6
Sometime in Previous Year	84.3	58.9	38.6	32.5	37.7	43.3	58.3	58.6
Full-Time in Previous Year	47.2	27.9	12.7	10.2	13.3	17.0	27.8	28.4
White								
Reference Period	82.8	51.0	29.7	20.8	23.6	40.4	47.9	55.9
Sometime in Previous Year	90.7	63.2	43.3	34.3	39.9	50.0	60.5	66.3
Full-Time in Previous Year	59.1	33.2	16.9	12.5	16.3	23.0	31.2	38.6
Black								
Reference Period	81.7	37.7	19.4	19.1	20.2	23.3	38.8	38.6
Sometime in Previous Year	91.0	49.5	31.4	34.7	35.3	30.6	51.0	48.5
Full-Time in Previous Year	52.5	19.9	8.9	10.8	10.5	8.7	20.8	18.7
Hispanic								
Reference Period	78.4	42.2	23.8	14.5	11.0	27.1	36.9	51.2
Sometime in Previous Year	87.3	55.6	39.2	28.3	28.9	37.2	50.1	63.3
Full-Time in Previous Year	50.8	24.3	12.1	7.1	5.2	14.8	22.4	25.3

Continued

Table 6 (continued). Employment Rates, Ages 25 to 61

% Employed During…	No Disability	Disability: At least 1 of the 6	Participation Restriction: Work Limitation	Participation Restriction: IADLs	Activity Limitation: ADLs	Impairments: Mental	Impairments: Physical	Impairments: Sensory
Native American								
Reference Period	77.1	41.4	15.3	11.6	14.5	16.8	38.2	43.7
Sometime in Previous Year	87.2	52.3	27.8	21.3	22.5	26.4	51.9	47.7
Full-Time in Previous Year	50.6	21.2	3.3	4.8	0.0	6.6	16.3	26.6
Asian								
Reference Period	78.7	53.4	35.5	20.4	20.4	27.5	48.6	60.6
Sometime in Previous Year	88.4	67.6	50.0	35.6	39.7	41.6	63.1	72.2
Full-Time in Previous Year	55.4	40.3	24.2	12.1	20.4	14.0	38.5	35.8
LT High School								
Reference Period	72.2	27.3	14.1	10.0	11.2	21.8	24.5	34.4
Sometime in Previous Year	83.2	37.6	24.6	16.9	21.5	25.3	34.0	44.1
Full-Time in Previous Year	45.1	15.6	7.7	5.8	6.4	9.1	13.4	19.0
High School								
Reference Period	80.7	46.4	26.7	20.2	20.5	32.9	44.5	53.4
Sometime in Previous Year	89.6	59.1	39.7	36.0	38.1	44.2	58.0	63.6
Full-Time in Previous Year	55.8	28.4	12.7	10.1	13.6	17.2	27.0	35.7
More Than High School								
Reference Period	84.6	59.6	37.4	26.9	31.0	50.0	56.8	62.4
Sometime in Previous Year	92.1	72.2	52.8	43.3	48.8	61.4	70.0	72.9
Full-Time in Previous Year	61.1	39.7	22.8	17.8	20.9	29.9	38.2	43.2

Source: 2001 SIPP core waves 2-5, reference months June 2001-May 2002, and the wave 5 Functional Limitations and Disability TM.

Note: Because of attrition, there is a small number of respondents (1 percent) who do not have complete data to measure full year employment dating back to wave 2. The amount of attrition is relatively small because we use Wave 5 as the base period.

Standard Errors for this Table are in Appendix Table B3

Table 7. Annual Economic Well Being Measures, Ages 25 to 61

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the 6	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
All								
% Below Poverty Line	6.5	18.8	26.0	26.3	25.1	24.9	19.1	17.6
Mean Income to Needs Ratio (mean family income divided by poverty threshold)	4.4	3.1	2.5	2.5	2.6	2.6	3.1	3.1
Median Income to Needs Ratio (median family income divided by poverty threshold)	3.6	2.5	1.9	1.8	2.0	2.0	2.5	2.6
Mean Family Income	$64,258	$43,823	$35,442	$35,196	$36,132	$37,448	$43,353	$43,393
Median Family Income	$53,313	$33,895	$25,664	$24,989	$26,735	$26,218	$33,490	$33,776
Men								
% Below Poverty Line	5.2	17.1	23.5	25.1	25.3	20.3	17.6	16.2
Mean Income to Needs Ratio	4.6	3.2	2.6	2.5	2.6	2.7	3.2	3.3
Median Income to Needs Ratio	3.8	2.6	2.1	2.0	2.0	2.1	2.5	2.9
Mean Family Income	$65,715	$44,856	$36,573	$36,184	$37,741	$38,678	$44,131	$46,626
Median Family Income	$54,400	$35,072	$27,344	$26,829	$27,602	$28,194	$34,366	$38,213
Women								
% Below Poverty Line	7.9	20.2	28.3	27.2	24.9	29.5	20.0	19.2
Mean Income to Needs Ratio	4.3	3.1	2.4	2.4	2.5	2.5	3.1	2.9
Median Income to Needs Ratio	3.5	2.4	1.8	1.7	1.9	1.8	2.4	2.2
Mean Family Income	$62,787	$43,009	$34,401	$34,462	$34,939	$36,231	$42,866	$39,949
Median Family Income	$52,002	$33,046	$24,178	$23,863	$26,354	$23,864	$32,842	$30,453
White								
% Below Poverty Line	5.5	16.2	23.0	24.1	22.1	21.8	16.7	14.9
Mean Income to Needs Ratio	4.6	3.3	2.7	2.6	2.7	2.8	3.3	3.3
Median Income to Needs Ratio	3.8	2.7	2.1	2.1	2.2	2.2	2.7	2.7
Mean Family Income	$66,248	$45,988	$37,562	$37,344	$38,102	$39,721	$45,471	$45,062
Median Family Income	$55,204	$36,606	$27,985	$27,596	$28,853	$29,348	$36,140	$36,137

Continued

Table 7 (continued). Annual Economic Well Being Measures, Ages 25 to 61

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the 6	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
Black								
% Below Poverty Line	13.3	32.6	38.7	35.6	34.8	40.5	31.3	32.7
Mean Income to Needs Ratio	3.1	2.1	1.8	1.7	1.9	1.6	2.2	2.1
Median Income to Needs Ratio	2.6	1.5	1.3	1.3	1.4	1.2	1.6	1.5
Mean Family Income	$46,723	$31,601	$26,343	$25,308	$27,978	$26,366	$31,261	$32,282
Median Family Income	$38,512	$21,806	$17,077	$17,024	$17,717	$15,378	$22,278	$20,458
Hispanic								
% Below Poverty Line	12.6	26.8	30.0	31.0	33.5	30.9	27.8	24.2
Mean Income to Needs Ratio	2.9	2.2	2.0	1.9	1.8	2.0	2.2	2.2
Median Income to Needs Ratio	2.3	1.7	1.5	1.4	1.4	1.5	1.6	1.7
Mean Family Income	$47,799	$35,736	$32,317	$30,214	$29,472	$30,996	$35,109	$35,129
Median Family Income	$37,744	$28,729	$24,046	$20,866	$20,256	$21,816	$27,978	$28,424
Native American								
% Below Poverty Line	13.3	27.3	40.6	38.0	56.0	45.7	30.0	27.8
Mean Income to Needs Ratio	3.4	2.1	1.8	1.9	1.7	1.4	2.0	2.3
Median Income to Needs Ratio	2.7	1.7	1.3	1.7	0.7	1.3	1.6	1.8
Mean Family Income	$50,619	$31,209	$24,795	$26,356	$23,238	$22,308	$30,546	$32,143
Median Family Income	$38,218	$27,430	$19,118	$26,094	$22,308	$19,226	$26,094	$29,995
Asian								
% Below Poverty Line	6.9	13.7	15.1	17.1	21.5	9.5	14.1	15.0
Mean Income to Needs Ratio	4.8	3.5	2.8	3.1	3.3	3.1	3.6	3.7
Median Income to Needs Ratio	3.8	2.8	2.4	2.1	1.6	2.7	3.0	2.7
Mean Family Income	$74,459	$54,738	$44,529	$46,962	$48,765	$48,524	$59,316	$54,766
Median Family Income	$60,251	$44,142	$36,038	$34,583	$34,583	$36,193	$44,142	$44,142

Continued

Table 7 (continued). Annual Economic Well Being Measures, Ages 25 to 61

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the 6	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
LT High School								
% Below Poverty Line	19.3	35.2	40.3	42.8	44.6	41.5	36.2	30.7
Mean Income to Needs Ratio	2.2	1.7	1.5	1.5	1.4	1.5	1.7	1.8
Median Income to Needs Ratio	1.9	1.4	1.2	1.2	1.1	1.2	1.4	1.5
Mean Family Income	$37,075	$26,500	$23,213	$22,847	$21,092	$23,242	$25,729	$27,385
Median Family Income	$30,824	$19,630	$16,647	$15,586	$14,705	$16,480	$18,610	$20,420
High School								
% Below Poverty Line	8.3	19.7	25.8	24.5	25.1	24.7	19.8	17.8
Mean Income to Needs Ratio	3.5	2.8	2.4	2.5	2.5	2.4	2.8	3.0
Median Income to Needs Ratio	3.0	2.3	1.9	1.9	1.9	2.0	2.4	2.5
Mean Family Income	$51,111	$38,787	$34,576	$35,047	$36,065	$36,096	$38,252	$41,674
Median Family Income	$43,250	$31,419	$26,099	$26,856	$28,156	$26,218	$31,403	$33,187
More than High School								
% Below Poverty Line	3.9	11.4	17.3	17.6	14.5	14.8	11.5	11.3
Mean Income to Needs Ratio	5.2	4.0	3.3	3.1	3.3	3.4	4.0	3.9
Median Income to Needs Ratio	4.3	3.3	2.5	2.5	2.9	2.7	3.3	3.3
Mean Family Income	$74,353	$54,777	$44,066	$43,121	$44,338	$47,486	$54,347	$52,247
Median Family Income	$62,357	$44,636	$33,409	$32,239	$36,852	$35,725	$44,138	$44,142

Source: 2001 SIPP core waves 2-5, reference months June 2001-May 2002, and the wave 5 Functional Limitations and Disability TM.

Note: Because of attrition, there is a small number of respondents (1 percent) who do not have complete data to measure full year income dating back to wave 2. The amount of attrition is relatively small because we use Wave 5 as the base period.

Standard Errors for this Table are in Appendix Table B4

Table 8. Annual Changes in Health, Employment, and Program Participation Status Since Interview Wave 5 of the 2001 SIPP Panel, by Disability Status, Ages 25-61

	No Work Limitation	Work Limitation
Full Sample Size	30,334	3,645
Population Estimate	128,070,000	14,423,813
Wave 5 and 8 Sample Size [1]	26,587	3,145
Population Estimate	112,700,000	12,540,000
Changes in Work Limitation Status		
%Work Limitation in Wave 5	0.0	100.0
%Work Limitation 1 year later	NA	75.6
%With No Work Limitation 1 year later	NA	24.4
%Without Work Limitation in Wave 5	100.0	0.0
%Work Limitation 1 year later	3.2	NA
%With No Work Limitation 1 year later	96.8	NA
Monthly Employment [2]		
%Employed (May 2002)	82.0	28.0
%Employed 1 year later (May 2003)	75.6	22.0
%Not employed 1 year later (May 2003)	6.4	6.0
%Not Employed (May 2002)	18.0	72.0
%Employed 1 year later (May 2003)	5.8	6.1
%Not employed 1 year later (May 2003)	12.2	65.9
Monthly Program Participation		
%Receiving TANF, GA, or SSI (May 2002)	0.6	24.2
%Receiving TANF, GA or SSI 1 year later (May 2003)	0.3	19.7
%Not Receiving TANF, GA, or SSI 1 year later (May 2003)	0.3	4.5
%Not Receiving TANF, GA, or SSI (May 2002)	99.4	75.8
%Receiving TANF, GA or SSI 1 year later (May 2003)	0.5	4.2
%Not Receiving TANF, GA, or SSI 1 year later (May 2003)	98.9	71.6
%Receiving SSI or Social Security (May 2002)	0.8	43.3
%Receiving SSI or Social Security 1 year later (May 2003)	0.5	39.7
%Not Receiving SSI or Social Security 1 year later (May 2003)	0.3	3.6
%Not Receiving SSI or Social Security (May 2002)	99.2	56.7
%Receiving SSI or Social Security 1 year later (May 2003)	1.0	6.4
%Not Receiving SSI or Social Security 1 year later (May 2003)	98.1	50.2

Source: 2001 SIPP core waves 5 and 8 and the wave 5 Functional Limitations and Disability TM.

[1] Because of attrition, there are respondents who do not have data in both time periods (May 2002 and May 2003). The amount of attrition is larger than in previous tables, though likely does not have a substantive effect on the findings.

[2] Employed is defined as any earnings during the month.

Standard Errors for this Table are in Appendix Table B5

Table 9. Multi-period Disability Definitions, by Disability Status, Ages 25-61

	Group 1: No Work Limitations in Wave 2 or Wave 5	Group 2: Work Limitations in Wave 2, but not Wave 5	Group 3: Work Limitations in Wave 5, but not Wave 2	Group 4: Work Limitations in Waves 2 and 5
Wave 2 and 5 Sample Size [1]	27,017	868	769	2,652
Population Estimate	115,800,000	3,591,538	3,152,649	10,500,000
Health Status in Wave 5				
%Excellent/Very Good	71.6	41.8	20.5	10.7
%Good	23.9	37.2	29.4	22.4
%Fair/Poor	4.5	21.0	50.1	66.8
ADL or IADLs in Wave 5				
%IADLs	0.4	3.6	16.8	35.3
%ADLs	0.3	3.4	12.6	22.8
Impairments in Wave 5				
%Mental	1.1	4.8	8.3	24.7
%Physical	6.2	30.8	60.6	74.4
%Sensory	2.5	8.9	12.6	24.4
Employment in Wave 5 [2]				
%Employed	84.3	66.9	54.4	19.9
%Not Employed	15.7	33.1	45.6	80.1

Source: 2001 SIPP core waves 2 and 5 and the wave 5 Functional Limitations and Disability TM.

[1] Wave 2 and 5 sample size represents respondents who had at least one month of data in both waves 2 and 5 and answered the wave 5 topical module.

[2] Employed is defined as any earnings during the month.

Standard Errors for this Table are in Appendix Table B6

Table 10. Work Limitation Prevalence rates from Waves 1-9 in the 2001 SIPP Panel, Ages 25-61

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8	Wave 9
Percent with Work Limitation	11.8	10.3	10.7	10.0	10.2	10.4	10.1	10.1	10.2

Source: 2001 SIPP core waves 1 through 9.

Note: If respondent responded yes to question about work limiting condition in any month of the wave, they are coded as having a work limiting condition. Age is average age over the wave.

Standard Errors for this Table are in Appendix Table B7

Table 11. Employment and Program Participation Five Years Before and After the SIPP Interview Year of Adults Age 25 to 55 from Restricted Access Matched SIPP SSA Data from the 1990, 1991, 1992, and 1993 SIPP Panels

	Year Relative to First SIPP Interview										
	-5	**-4**	**-3**	**-2**	**-1**	**0**	**1**	**2**	**3**	**4**	**5**
Employment Rates											
Men without Limitations	92.5	93.6	94.7	96	97.1	100	96.7	95.1	93.8	92.8	91.6
Men with Limitations	88.5	89.3	90.8	91	92.4	100	93.2	87.9	84.7	81.6	78.5
Women without Limitations	84.5	86.4	88.9	91.2	93.9	100	94.4	91.9	90.2	89.1	87.7
Women with Limitations	78.3	78.8	80.4	85.4	88.5	100	87.2	82.8	79.2	76.3	74.6
SSI/DI Participation Rates											
Men without Limitations	0	0	0	0	0	0	0.3	0.7	1	1.4	1.7
Men with Limitations	0.8	0.8	0.8	0.5	0.4	0	3	5.8	8	10.4	11.1
Women without Limitations	0.1	0	0	0	0	0	0.3	0.7	1.1	1.5	1.9
Women with Limitations	1.1	0.9	0.8	0.5	0.4	0	2.4	4.8	6.9	9.8	10.6

Source: Stapleton, Wittenburg and Maag (2005). They define employment and program participation using SSA administrative data. Employment is defined as any annual earnings and program participation is defined as any participation in SSI or DI during the year.

Table 12. Estimates of Population of Persons with Disabilities Across Datasets, By Age

			Participation Restriction		Activity Limitation	Impairment		
Data Source, Calendar Year	**No Disability**	**Disability**	**Work Limitation**	**IADL**	**ADL**	**Mental**	**Physical**	**Sensory**
Ages 18 to 24								
Census 2000	24,790,000	1,442,000	NA	NA	207,000	883,000	456,000	326,000
American Community Survey, 2003	24,194,401	1,667,355	714,229	399,423	187,904	953,448	535,666	356,820
Current Population Survey, March 2004	26,803,529	816,662	816,662	NA	NA	NA	NA	NA
National Health Interview Survey, 2002	25,225,000	2,126,000	927,000	228,000	147,000	786,000	859,000	78,000
Panel Study on Income Dynamics, 2001	9,123,000	690,000	690,000	NA	NA	NA	NA	NA
Survey of Income and Program Participation, 2002	**24,820,000**	**2,426,337**	**1,209,000**	**366,000**	**146,000**	**1,076,000**	**982,000**	**533,000**
Ages 25 to 61								
Census 2000	124,493,000	14,005,000	NA	NA	2,627,000	5,218,000	9,447,000	3,346,000
American Community Survey, 2003	126,649,510	17,146,845	9,854,223	4,227,427	2,925,715	5,745,569	10,819,521	3,944,388
Current Population Survey, March 2004	132,649,606	12,102,093	12,102,093	NA	NA	NA	NA	NA
National Health Interview Survey, 2002	115,934,000	23,192,000	13,725,000	3,169,000	1,350,000	4,627,000	14,545,000	2,730,000
Panel Study on Income Dynamics, 2001	117,273,000	20,054,000	20,054,000	NA	NA	NA	NA	NA
Survey of Income and Program Participation, 2002	**115,900,000**	**26,620,000**	**14,420,000**	**4,931,000**	**3,362,000**	**4,394,000**	**18,790,000**	**6,490,000**
Ages 62 to 64								
Census 2000	4,806,000	1,413,000	NA	NA	257,000	348,000	1,134,000	373,000
American Community Survey, 2003	4,941,802	1,795,533	1,111,762	404,875	293,507	393,782	1,292,381	455,364
Current Population Survey, March 2004	5,482,126	1,278,528	1,278,528	NA	NA	NA	NA	NA
National Health Interview Survey, 2002	4,239,000	2,045,000	1,281,000	300,000	127,000	144,000	1,466,000	310,000
Panel Study on Income Dynamics, 2001	3,911,000	1,684,000	1,684,000	NA	NA	NA	NA	NA
Survey of Income and Program Participation, 2002	**3,958,000**	**2,581,000**	**1,496,000**	**567,000**	**376,000**	**252,000**	**2,165,000**	**672,000**

Continued

Table 12 (continued). Estimates of Population of Persons with Disabilities Across Datasets, By Age

			Participation Restriction		Activity Limitation	Impairment		
Data Source, Calendar Year	**No Disability**	**Disability**	**Work Limitation**	**IADL**	**ADL**	**Mental**	**Physical**	**Sensory**
Ages 18 to 64								
Census 2000	154,091,000	16,861,000	NA	NA	3,093,000	6,450,000	11,039,000	4,046,000
American Community Survey, 2003	155,785,713	20,609,733	11,680,214	5,031,725	3,407,126	7,092,799	12,647,568	4,756,572
Current Population Survey, March 2004	164,935,261	14,197,283	14,197,283	NA	NA	NA	NA	NA
National Health Interview Survey, 2002	145,399,000	27,363,000	15,934,000	3,697,000	1,626,000	5,558,000	16,871,000	3,119,000
Panel Study on Income Dynamics, 2001	130,309,000	22,429,000	22,429,000	NA	NA	NA	NA	NA
Survey of Income and Program Participation, 2002	**144,678,000**	**31,627,000**	**17,126,000**	**5,864,000**	**3,885,000**	**5,723,000**	**21,938,000**	**7,695,000**

Source: Authors' calculations from various public use micro data files.

[1] The Census 2000 collects 1999 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in 2000.

[2] The March 2004 Current Population Supplement collects 2003 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in March 2004.

[3] The PSID only asks this question for the Head and Wife of the Household. Children of the Head and Wife are not asked this question, and the PSID assigns missing values to children for this question. As a result, the population with and without a work limitation is small relative to the other national surveys.

Note: Standard errors for SIPP estimates are in Appendix Table B1. Standard errors for other datasets are available in respective user guides.

Table 13. Estimated Prevalence of Persons with Disabilities, By Age

		Participation Restriction		Activity Limitation	Impairment		
	Disability	**Work Limitation**	**IADL**	**ADL**	**Mental**	**Physical**	**Sensory**
Ages 18 to 24							
Census 2000	5.5	NA	NA	0.8	3.4	1.7	1.2
ACS, 2003	6.5	2.8	1.5	0.7	3.7	2.1	1.4
CPS, March 2004	3.0	3.0	NA	NA	NA	NA	NA
NHIS, 2002	7.8	3.4	0.8	0.5	2.9	3.1	0.3
PSID, 2001	7.0	7.0	NA	NA	NA	NA	NA
SIPP, 2002	**8.9**	**4.4**	**1.3**	**0.5**	**4.0**	**3.6**	**2.0**
Ages 25 to 61							
Census 2000	10.1	NA	NA	1.9	3.8	6.8	2.4
ACS, 2003	11.9	6.9	2.9	2.0	4.0	7.5	2.7
CPS, March 2004	8.4	8.4	NA	NA	NA	NA	NA
NHIS, 2002	16.7	9.9	2.3	1	3.3	10.5	2.0
PSID, 2001	14.6	14.6	NA	NA	NA	NA	NA
SIPP, 2002	**18.7**	**10.1**	**3.5**	**2.4**	**3.1**	**13.2**	**4.6**
Ages 62 to 64							
Census 2000	22.7	NA	NA	4.1	5.6	18.2	6.0
ACS, 2003	26.7	16.5	6.0	4.4	5.8	19.2	6.8
CPS, March 2004	18.9	18.9	NA	NA	NA	NA	NA
NHIS, 2002	32.5	20.4	4.8	2.0	2.3	23.3	4.9
PSID, 2001	30.1	30.1	NA	NA	NA	NA	NA
SIPP, 2002	**39.5**	**22.9**	**8.7**	**5.8**	**3.9**	**33.1**	**10.3**
Ages 18 to 64							
Census 2000	9.9	NA	NA	1.8	3.8	6.5	2.4
ACS, 2003	11.7	6.6	2.9	1.9	4.0	7.2	2.7
CPS, March 2004	7.9	7.9	NA	NA	NA	NA	NA
NHIS, 2002	15.8	9.2	2.1	0.9	3.2	9.8	1.8
PSID, 2001	14.7	14.7	NA	NA	NA	NA	NA
SIPP, 2002	**17.9**	**9.7**	**3.3**	**2.2**	**3.2**	**12.4**	**4.4**

Source: Authors' calculations from various public use micro data files.

[1] The Census 2000 collects 1999 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in 2000.

[2] The March 2004 Current Population Supplement collects 2003 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in March 2004.

[3] The PSID only asks this question for the Head and Wife of the Household. Children of the Head and Wife are not asked this question, and the PSID assigns missing values to children for this question. As a result, the population with and without a work limitation is small relative to the other national surveys.

Note: Standard errors for SIPP estimates are in Appendix Table B1. Standard errors for other datasets are available in respective us

Table 14. Estimates of the Employment Rate Across Datasets, Ages 25-61

			Participation Restriction		Activity Limitation	Impairment		
	No Disability	Disability	Work Limitation	IADL	ADL	Mental	Physical	Sensory
Reference Week, Ages 25 to 61								
Census 2000	78.8	41.8	NA	NA	21.7	30.2	35.6	52.1
ACS, 2003	79.5	39.3	18.9	17.9	18.3	28.2	33.8	49.9
CPS, March 2004	81.4	19.6	19.6	NA	NA	NA	NA	NA
NHIS, 2002	83.3	47.3	29.8	18.3	14.1	37.1	43.8	58.6
PSID, 2001	83.8	53.2	53.2	NA	NA	NA	NA	NA
SIPP, 2002	**82.4**	**48.9**	**27.7**	**20.3**	**22.8**	**37**	**46.4**	**53.5**
Some Attachment, Ages 25 to 61								
Census 2000	86.3	51.9	NA	NA	31.9	40.4	45.4	61.1
ACS, 2003	87.1	48.9	28.3	25.8	26.2	37.2	42.8	58.1
CPS, March 2004	86.2	27.9	27.9	NA	NA	NA	NA	NA
NHIS, 2002	88.3	57.9	42	25.7	19.9	51.8	53.8	66.6
PSID, 2001	91.9	67.8	67.8	NA	NA	NA	NA	NA
SIPP, 2002	**90.6**	**61.1**	**41**	**34.1**	**38.8**	**46.3**	**59**	**63.7**
Full-Year Full-Time, Ages 25 to 61								
Census 2000	58.8	27.1	NA	NA	13.1	16.7	22.6	37.4
ACS, 2003	59.6	24.5	9.1	9	9.4	15	20.3	34.5
CPS, March 2004	65.3	9.4	9.4	NA	NA	NA	NA	NA
NHIS, 2002	62.8	29.8	16.3	9.3	6.2	21.3	27.2	43.4
PSID, 2001	70.5	45.1	45.1	NA	NA	NA	NA	NA
SIPP, 2002	**58.1**	**31.2**	**15.3**	**12**	**15**	**20.3**	**29.6**	**35.6**

Source: Authors' calculations from various public use micro data files.

[1] The Census 2000 collects 1999 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in 2000.

[2] The March 2004 Current Population Supplement collects 2003 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in March 2004.

[3] The PSID only asks this question for the Head and Wife of the Household. Children of the Head and Wife are not asked this question, and the PSID assigns missing values to children for this question. As a result, the population with and without a work limitation is small relative to the other national surveys.

Note: Standard errors for SIPP estimates are in Appendix Table B3. Standard errors for other datasets are available in respective user guides.

Table 15. Estimates of Economic Well Being Across Datasets, Ages 25-61

			Participation Restriction		Activity Limitation	Impairment		
	No Disability	**Disability**	**Work Limitation**	**IADL**	**ADLs**	**Mental**	**Physical**	**Sensory**
Poverty Rates, Ages 25 to 61								
Census 2000	7.9	23.2	NA	NA	30.0	30.6	24.2	20.1
ACS, 2003	7.7	23.7	29.6	29.7	28.9	30.8	25.0	20.8
CPS, March 2004	8.0	28.8	28.8	NA	NA	NA	NA	NA
NHIS, 2002	7.5	21.2	26.5	32.3	30.1	29.8	22.1	20.7
PSID, 2001	4.6	11.8	11.8	NA	NA	NA	NA	NA
SIPP, 2002	**6.5**	**18.8**	**26.0**	**26.3**	**25.1**	**24.9**	**19.1**	**17.6**

Source: Authors' calculations from various public use micro data files.

[1] The Census 2000 collects 1999 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in 2000.

[2] The March 2004 Current Population Supplement collects 2003 calendar year information on Poverty, Median Household Income, and Household Size Adjusted Income. Population and prevalence estimates are collected in March 2004.

[3] The PSID only asks this question for the Head and Wife of the Household. Children of the Head and Wife are not asked this question, and the PSID assigns missing values to children for this question. As a result, the population with and without a work limitation is small relative to the other national surveys.

Note: Standard errors for SIPP estimates are in Appendix Table B4. Standard errors for other datasets are available in respective user guides.

Appendix A: Summary of Disability Definition

The tables in this appendix present summaries of the disability measures included in the report for researchers interested in replicating the tables. Tables not numbered "A.X" appear in the body of the report. Tables A1-A5 contain the detailed definitions, including question wording and universes, of the concepts outlined in Table 3 and of other variables used in this analysis. Table A1 provides the specific wording and universes for each of the questions used to define the six disability categories. Table A2 contains the descriptions of the demographic variables and their various response categories. Also included in this table are the recodes we used of both the ethnic categories to identify Hispanics and the educational attainment variable to capture the four categories of educational attainment used in Tables 5-7. Although demographic information is collected for each month in each core wave, the demographic variables used in these analyses were from the wave 5 Functional Limitations and Disability topical module, and they represent the demographic characteristic of the respondent as of month four of wave 5.

Tables A3 and A4 provide detailed descriptions of the employment and economic well-being measures, respectively, presented in Table 3. Table A5 provides the descriptions and variable names for the program participation measures presented in Table 8.

Appendix Table A6 includes additional health related elements that have been used to develop disability measures in other studies. In most cases, these measures provide additional descriptive health information on people with disabilities (e.g., whether they are in excellent/good/fair/poor health).

Appendix Table A1. Disability Definitions from the 2001 SIPP

Census Term	Question	Ages
Impairment: Sensory Disability	QADQ4/CDQ9. Do you have any difficulties seeing the words and letters in ordinary newspaper print even when wearing glasses or contact lenses if you usually wear them? Note, includes blindness.	Ages 6 and older
	QADQ5/CDQ10. Are you able to see the words and letters in ordinary newspaper print at all?	Ages 6 and older
	QADQ6/CDQ11. Do you have difficulty hearing what is said in a normal conversation with another person even when wearing your hearing aid?	Ages 6 and older
	QADQ7/CDQ12. Are you able to hear what is said in a normal conversation at all?	Ages 6 and older
	QADQ8/CDQ13. Do you have any difficulty having your speech understood?	Ages 6 and older
	QADQ9/CDQ14. In general, are people able to understand your speech at all?	Ages 6 and older
Impairment: Physical Disability	QADQ10. Do you have any difficulty lifting and carrying something as heavy as 10 pounds - such as a bag of groceries?	Ages 15 and older
	QADQ11. Are you able to lift and carry a 10 pound bag of groceries at all?	Ages 15 and older
	QADQ14. Do you have any difficulty pushing or pulling large objects such as a living room chair?	Ages 15 and older
	QADQ15. Are you able to push or pull such large objects at all?	Ages 15 and older
	QADQ16. Do you have any difficulty...?	
	a. Standing or being on your feet for one hour?	Ages 15 and older
	b. Sitting for one hour?	Ages 15 and older
	c. Stooping, crouching, or kneeling?	Ages 15 and older
	d. Reaching over your head?	Ages 15 and older
	QADQ17. Do you have difficulty using your hands and fingers to do things such as picking up a glass or grasping a pencil?	Ages 15 and older
	QADQ18. Are you able to use your hands and fingers to grasp and handle at all?	Ages 15 and older
	QADQ19. Do you have any difficulty walking up a flight of 10 stairs?	Ages 15 and older
	QADQ20. Are you able to walk up a flight of 10 stairs at all?	Ages 15 and older
	QADQ21. Do you have any difficulty walking a quarter of a mile - about 3 city blocks?	Ages 15 and older
	QADQ22. Are you able to walk a quarter of a mile at all?	Ages 15 and older
	QADQ23. Do you have any difficulty using an ordinary telephone?	Ages 15 and older
	QADQ24. Are you able to use an ordinary telephone at all?	Ages 15 and older

Continue

Appendix Table A1 (continued). Disability Definitions from the 2001 SIPP

Census Term	Question	Ages
Impairment: Mental Disability	QADQ39/CDQ6. Do you have…?	
	a. A learning disability such as dyslexia?	Ages 6 and older
	b. Mental retardation?	Ages 6 and older
	c. A developmental disability such as autism or cerebral palsy?	Ages 6 and older
	d. Alzheimer's disease or any other serious problem with confusion or forgetfulness?	Ages 15 and older
	d. Attention Deficit Hyperactivity Disorder (ADHD)	Ages 6 to 14
	e. Any other mental or emotional condition?	Ages 15 and older
	e. Any other developmental condition for which he/she has received therapy or diagnostic services?	Ages 6 to 14
Activity Limitation: ADLs	QADQ25/CDQ16/18/20/22/24/26. Because of a physical or mental health condition, do you have difficulty doing any of the following by yourself? EXCLUDES THE EFFECTS OF TEMPORARY CONDITIONS - IF AN AID IS USED, ASKS WHETHER THE PERSON HAS DIFFICULTY WHEN USING THE AID.	
	QADQ26/CDQ17/19/21/23/25/27. Do you need the help of another person with …?	
	a. Getting around INSIDE the home?	Ages 6 and older
	c. Getting in and out of bed or a chair?	Ages 6 and older
	d. Taking a bath or shower?	Ages 6 and older
	e. Dressing? (For 6 to 14 year olds: Putting on his/her clothing by him/herself?)	Ages 6 and older
	g. Eating?	Ages 6 and older
	h. Using or getting to the toilet?	Ages 6 and older
Activity Limitation: IADLs	QADQ25. Because of a physical or mental health condition, do you have difficulty doing any of the following by yourself? EXCLUDES THE EFFECTS OF TEMPORARY CONDITIONS - IF AN AID IS USED, ASKS WHETHER THE PERSON HAS DIFFICULTY WHEN USING THE AID.	
	QADQ26. Do you need the help of another person with …?	
	b. Going OUTSIDE the home, for example, to shop or visit a doctor's office?	Ages 15 and older
	i. Keeping track of money or bills?	Ages 15 and older
	k. Doing light housework such as washing dishes or sweeping a floor?	Ages 15 and older
	l. Taking the right amount of prescribed medicine at the right time?	Ages 15 and older

Continue

Appendix Table A1 (continued). Disability Definitions from the 2001 SIPP

Census Term	Question	Ages
Participation Restriction: Work Limitation	CORE: Do you have a physical, mental or health condition that limits the kind and amount of work you can do?	Ages 15-69
	QCDQ3. Because of a physical, learning, or mental condition, does ... have any limitations in his/her ability to do regular school work?	Ages 6-19
Disability	For 18-69 year olds, if a person responds yes to at least one of the questions asked of 18-69 year olds in each of the disability categories above, the person is classified as having a disability. For 6 to 17 year olds, if the person answered yes to any of the questions asked of 6 to 17 year olds in the Work Limitations, ADLs, Mental Impairments, and Sensory Impairments sections, the child is classified as having a disability. For adults aged 70 and over, if they responded yes to any of the questions above, with the exception of the Work Limitations questions, they were classified as having a disability. For all persons ages 6 to 86 (Census topcodes age at 86), a person was classified as having a disability if they answered yes to any question in the ADLs, Mental Impairments, or Sensory Impairments sections.	
No Disability	Respondents who answered no to all disability questions they were asked were coded as not having a disability. For 18-69 year olds, respondents answered no to all of the questions in each of the disability categories above. For 6 to 17 year olds, respondents who answered no to all of the questions in the Work Limitations, ADLs, Mental Impairments, and Sensory Impairments sections, were coded as not having a disability. For adults aged 70 and over, if they responded no to all of the questions above, with the exception of the Work Limitations questions, they were classified as not having a disability. For all persons ages 6 to 86 (Census topcodes age at 86), a person was classified as not having a disability if they answered no to all question in the ADLs, Mental Impairments, or Sensory Impairments sections.	

Source: Author's adaptation from SIPP website and the Wave 5 Functional Limitations and Disability (Adult and Child) Topical Module Questionnaires
http://www.sipp.census.gov/sipp/top_mod/2001/quests/wave5/topmod2001w5.html
Note that children who lived in a household without a designated parent or guardian were not asked any of the disability questions. There are 209,735 6 to 17 year olds and 29,003 0 to 5 year olds who lived in households without a designated parent or guardian (who were not asked the disability questions).
Question CDQ3 was asked of 6-19 year olds, but the work limitation indicator only uses that question for persons 6 to 17 years old.

Appendix Table A2. Demographic Definitions from the 2001 SIPP

Census Term	Question	Ages
Gender	(Household Demographics Section) QRPSEX. Is [reference person's name] Male or Female?	All
Age	(Household Demographics Section) QDOB. The next questions are about [name]. What is your date of birth?	All
Race	(Household Demographics Section) RACE. Which of the categories on this card best describes your race? Responses include the following: (1) White; (2) Black; (3) American Indian, Aleut, or Eskimo; (4) Asian or Pacific Islander; (5) Other Race (enter the specific race reported). Note: Other is not a separate category in the ERACE variable. Mentions of other were recoded into White, Black, AIAN, Asian.	All
Origin	(Household Demographics Section) ORIGIN. Which of the categories on this card best describes your origin or descent? Responses include: (1) Canadian; (2) Dutch; (3) English; (4) French; (5) French-Canadian; (6) German; (7) Hungarian; (8) Irish; (9) Italian; (10) Polish; (11) Russian; (12) Scandinavian; (13) Scotch-Irish; (14) Scottish; (15) Slovak; (16) Welsh; (17) Other European; (20) Mexican; (21) Mexican-American; (22) Chicano; (23) Puerto Rican; (24) Cuban; (25) Central American; (26) South American; (27) Dominican Republic; (28) Other Hispanic; (30) African-American or Afro-American; (31) American Indian, Eskimo or Aleut; (32) Arab; (33) Asian; (34) Pacific Islander; (35) West Indian; (39) Another group not listed; (40) American.	All
Hispanic Recode	Recoded to 1 if ORIGIN=(20) Mexican or (21) Mexican-American or (22) Chicano or (23) Puerto Rican or (24) Cuban or (25) Central American or (26) South American or (27) Dominican Republic or (28) Other Hispanic; to 0 otherwise.	All
Education	(Household Demographics Section) EDUCA. What is the highest level of school [name] has completed or the highest degree he/she has received? Responses include: (31) Less than 1st grade; (32) 1st, 2nd, 3rd or 4th grade; (33) 5th or 6th grade; (34) 7th or 8th grade; (35) 9th grade; (36) 10th grade; (37) 11th grade; (38) 12th grade, no diploma; (39) HIGH SCHOOL GRADUATE - high school DIPLOMA or equivalent (For example: GED); (40) Some college but no degree; (41) Diploma or certificate from a vocational, technical, trade or business school beyond the High School level; (42) Associate degree in college - Occupational/vocational program; (43) Associate degree in college - Academic program; (44) Bachelors degree (For example: BA, AB, BS); (45) Master's degree (For example: MA, MS, MEng, MEd, MSW, MBA); (46) Professional School Degree (For example: MD,DDS,DVM,LLB,JD); (47) Doctorate degree (For example: PhD, EdD).	Ages 15 and older
Education Recode: Less than High School	Responses of (31) Less than 1st grade; (32) 1st, 2nd, 3rd or 4th grade; (33) 5th or 6th grade; (34) 7th or 8th grade; (35) 9th grade; (36) 10th grade; (37) 11th grade.	Ages 15 and older
High School	If response is (38) 12th grade, no diploma or (39) HIGH SCHOOL GRADUATE - high school DIPLOMA or equivalent (For example: GED).	Ages 15 and older

Continue

Appendix Table A2 (continue). Demographic Definitions from the 2001 SIPP

Census Term	Question	Ages
Some College	If response is (40) Some college but no degree; (41) Diploma or certificate from a vocational, technical, trade or business school beyond the High School level; (42) Associate degree in college - Occupational/vocational program; (43) Associate degree in college - Academic program;	Ages 15 and older
Four Year College Graduate or More	If response is (44) Bachelors degree (For example: BA, AB, BS); (45) Master's degree (For example: MA, MS, MEng, MEd, MSW, MBA); (46) Professional School Degree (For example: MD,DDS,DVM,LLB,JD); (47) Doctorate degree (For example: PhD, EdD).	Ages 15 and older

Source: Author's adaptation from SIPP website and the Wave 1 Core Questionnaire
http://www.sipp.census.gov/sipp/core_content/2001/quests/wave1.html

Appendix Table A3. Employment Definitions from the 2001 SIPP

Census Term	Variable Description	Ages
	(Labor Force Section) Total person's earnings. SIPP reported earnings represent gross income BEFORE any deductions for taxes, health insurance, and so on.	Ages 15 and older
Employment Status Questions	(Labor Force Section) Usual hours worked during the reference month at Job 1, Job 2, business 1, business 2.	Ages 15 and older
	(Labor Force Section) Number of weeks worked during the reference month.	Ages 15 and older
Employment Definitions for Table 6		
Employed: Reference Period	The person reports any earnings in May 2002. May 2002 represents the month that all respondents in wave 5 were asked about.	Ages 25 to 61
Employed: Sometime in Previous Year	Usual hours worked during the month times the number of weeks worked during the month summed over the period June 2001-May 2002 - if greater than or equal to 52 hours, the person worked sometime in the previous year.	Ages 25 to 61
Employed: Full-time year round	If the average over the 12 month period of June 2001-May 2002 of the usual hours worked during the month is equal to or greater than 35 and the total number of weeks worked during the 12 month period was equal to or greater than 50, the person is considered to be working full time year round.	Ages 25 to 61
Employment Definitions for Tables 8-9		
Employed	The person reported any earnings during the reference month or wave. The reference months were May 2002 and May 2003 for table 8; in any month during wave 5 for table 9.	Ages 25 to 61
Not Employed	The person did not report any earnings during the reference month or wave. The reference months were May 2002 and May 2003 for table 9, in any month during wave 5 for table 9.	Ages 25 to 61

Source: Author's adaptation from SIPP website and the Wave 1 Core Questionnaire
http://www.sipp.census.gov/sipp/core_content/2001/quests/wave1.html

Appendix Table A4. Economic Well-Being Measures from the 2001 SIPP

Census Term	Variable Description	Ages
Income	(Labor Force, General Income, and Assets Sections). Respondents are asked the amount of income received from the following sources for each reference month: wages, salary, commissions, bonuses, overtime pay or tips from all jobs (before deductions for taxes); interest, dividends, rents and royalties, estates and trusts, Social Security and Railroad retirement, SSI, TANF, other cash welfare, Unemployment compensation, Worker's compensation, Veteran's payments, private pensions, Federal employee pensions, military retirement, state and local employee pensions, alimony, child support, financial assistance, and other forms of cash income.	Ages 15 and older
Family Income Relative to Poverty	The SIPP provides monthly poverty thresholds at the family level (all persons related by blood, marriage, or adoption residing together), and the number of people in the family in each month. We calculated an average poverty threshold over the 12 months (June 2001-May 2002). The income to poverty ratio represents the ratio of annualized income to the average poverty threshold for the period June 2001-May 2002.	All ages except unrelated HH members below the age of 15.
Family Income	The sum of income for each household member age 15 and older in the family unit. The Census Bureau's definition of family includes all persons related by blood, marriage or adoption. Annual income represents income for the 12 month period June 2001 through May 2002 (May 2002 represents the reference month that all persons in Wave 5 were asked about). Note that income is annualized for respondents with fewer than 12 months of data.	All ages

Source: Author's adaptation from SIPP website and the Wave 1 Core Questionnaire
http://www.sipp.census.gov/sipp/core_content/2001/quests/wave1.html

Appendix Table A5. Program Participation Measures from the 2001 SIPP

Census Term	Variable Description	Ages
Means Tested Cash Transfer	(TPTRNINC) During the reference month, the total amount of income from means tested cash transfers for persons ages 15 and older.	Ages 15 and older
TANF	(RCUTYP20) During the reference month, whether the person received TANF.	All ages
General Assistance	(RCUTYP21) During the reference month, whether the person received General Assistance.	All ages
Supplemental Security Income	(RCUTYP03 and RCUTYP04) During the reference month, whether the person received Federal (RCUTYP03) or State SSI (RCUTYP04).	All ages
Social Security	(RCUTYP01) During the reference month, whether the person received Social Security.	Ages 15 and older

Source: Author's adaptation from SIPP website and the Wave 1 Core Questionnaire
http://www.sipp.census.gov/sipp/core_content/2001/quests/wave1.html
Variable names appear in parentheses before the variable description.

Appendix Table A6. Additional SIPP Questions Related to Health and Disability Not Included in the Analysis

Variable	General Definitions	Age Category	Interview Wave	Variable Name
Disability Variables				
Participation Restriction-Employment	**Generally a long lasting physical or mental impairment that limits a person's ability to work.**			
Work Prevention	Does your health or condition prevent you from working at a job or business?		1,5,8	-DISPREV-
Work Limitation/finding job	Do you have a long-lasting physical or mental condition that has made it difficult to remain employed or find a job?		5.8	ADQ43
Child: Special education	Special education- do you receive?			
Participation Restriction-Life Situations such as going outside the home to doctor's office, shopping, church, etc.	**Generally, a long lasting physical or mental impairment that restricts the extent of the person's involvement in life situations (going to store, church, social functions, work, etc.)**			
Housework Limitations	Do you have a physical, mental or other health condition that limits the kind or amount of housework?		5.8	ADq45
Prevent Housework	Do you…..prevent housework limitations		5.8	ADQ46
Child: Ordinary Activities	Does…have a serious physical or mental condition or developmental delay that limits ordinary activities		5.8	CDQ1A
Child: Sports	Does...condition that limits sports?		5.8	cdq15
Child: Other children	Does condition…play with other children?			cdq28
Functional Limitation	**Difficulty with Activities of Daily Living or Instrumental Activities of Daily Living.**			
ADL/IADL Assistance	Do you need help of another person with …(fill in ADL or IADL) ?		5.8	ADQ26
Child ADLs/IADLs	Difficulties doing the following: getting around inside of home, outside the home, in and out of bed or chair, taking a bath or shower, dressing, walking, eating, toilet, bills, meals, light housework, taking medicine		5,8	CDq16-27
Impairment	**Presence of a long lasting health condition or mental condition generally associated with disability, including: Sensory (vision or hearing impairment), Physical (walking, climbing stairs, reaching, lifting or carrying) , or Mental (learning, remembering, or concentrating**			

Continued

Appendix Table A6 (continued). Additional SIPP Questions Related to Health and Disability Not Included in the Analysis

Variable	General Definitions	Age Category	Interview Wave	Variable Name
Physical functional limitations	lifting 10 lbs, lifting 25 lbs, push or pull large objects, Standing, sitting, stooping, reach, grasping pencil, walking flight of stairs, , walking 1/4 mile, telephone.		5.8	ADQ10- 24
Physical functional limitations/at all	Can you …… at all (above categories)?		5.8	ADQ10- 24
Condition/based on above difficulties	The SIPP records responses of specific types of conditions associated with the above functional and work limitations.		5,8	ADQ32, ADQ 33, ADQ 47
Duration of condition	Has condition lasted for at least 5 months? Will it last for at least 12 more months		5,8	ADQ36, ADQ37
Sight, Sound or Speech	Do you have difficulties seeing the words and letters in ordinary newspaper print even when hearing glasses or contact lenses if you usually wear them? Do you have difficulty hearing what is said in a normal conversation even with hearing aid? Do you have difficulty having your speech understood (do not enter yes if they simply can't speak English) Note: includes extremes such as blind and deaf		5.8	ADQ4-ADQ9
Sight, Sound or Speech/at all	Can you …… at all (above categories)?		5.8	ADQ4-ADQ9
Child: Sight, Sound or Speech	Do you have difficulties seeing the words and letters in ordinary newspaper print even when hearing glasses or contact lenses if you usually wear them? Do you have difficulty hearing what is said in a normal conversation even with hearing aid? Do you have difficulty having your speech understood (do not enter yes if they simply can't speak English)?			cdq9-14
Child: mental condition	Do you have a 1) learning disability such as dyslexia? Mental retardation? Developmental disability such as autism or cerebral palsy? Attention deficit disorder> other developmental condition for which you received therapy?		5,8	cdq5a
Child: Condition/based on above difficulties	condition/conditions cause difficulty?		5,8	cdq29

Continued

Appendix Table A6 (continued). Additional SIPP Questions Related to Health and Disability Not Included in the Analysis

Variable	General Definitions	Age Category	Interview Wave	Variable Name
Other				
General Health	Would you say your health in general is excellent, very good, good, fair, or poor?	16 and above?	5, 8	ADQ1
Onset	When did condition first bother you/year		5, 8	ADQ36
Use of Assistive Devices	Do you use any of the following aids? Cane, crutches or a walker? Wheelchair, electric scooter, or similar aid? Hearing aid?		5, 8	ADQ2
Child: Use of Assistive Devices	Do you use any of the following aids? Cane, crutches or a walker? Wheelchair, electric scooter, or similar aid? Hearing aid?		5, 8	cdq7
Unique Definitions				
Two period ADL/IADL	two consecutive periods of ADL/IADL			

Appendix B: Standard Error Calculations

For each panel, the Census provides a comprehensive guide to calculating SIPP standard errors. Readers interested in calculating standard errors should refer to Tupek (2004) for specific methodological approaches and weighting factors. This guide is available at www.sipp.census.gov/sipp/sourceac/S&A01_w1tow6_cross_puf.pdf.

Because SIPP estimates are based on a sample, they might differ from estimates based on a complete census. Consequently, researchers using the SIPP should generate standard errors if they wish to make inferences about statistically significant differences across estimates.

Researchers should also use the appropriate weights on file in generating their overall estimates as well as the standard errors. The SIPP includes weights that cover each person within each household for monthly, quarterly, annual, and longitudinal estimates. For example, final full panel and final calendar year weights are provided on the full panel files for eligible sample members. There is one set of final panel weights and generally more than one set of calendar-year weights, one for each calendar year covered by the panel. As Tupek notes, users are forewarned to apply the appropriate weights on the weighting files before attempting to calculate estimates. The weights vary from one unit to the next because of weighting adjustments, and following people who move from interview to interview. If analysis is done for the general population without applying the appropriate weights, the results will be erroneous.

We used the wave 5 topical module weights for all estimates. We did not have access to the full longitudinal files at the time of our analysis (though they should be available after this paper is released). Consequently, there is some attrition bias associated with our longitudinal estimates in Table 8 that could be adjusted when the longitudinal weights become available. The extent of the bias is likely to be minimal (particularly for the wave 2 through 5 estimates in Table 6).

Most SIPP estimates have greater standard errors than those obtained through a simple random sample because the primary sampling units are sampled and clusters of living quarters are sampled for the SIPP in the area and new construction frames.

Consequently, standard errors generated in canned statistical packages, such as SAS, will understate estimated standard errors. However, Tupek (2002) provides an adjustment factor that users can apply to SAS-generated standard errors to make the appropriate adjustment for SIPP sampling in each wave. Because of the large standard errors associated with small samples, Tupek suggests that there is little chance that estimates of a base smaller than 200,000 will reveal useful information.

To derive standard errors that would be applicable to a wide variety of estimates and that could be prepared at a moderate cost, the Census developed three main methods for calculating standard errors:

· Replicate weighting methods

· Generalized variance procedures

· Simplified table estimates

For the replicate weight methods, users should obtain replicate weights from the Census for their particular estimates. Tupek describes the generalized variance procedures in detail, and they allow users to generate a variety of standard error estimates across panels and different scenarios (e.g., means, medians, dollar amounts) for specific populations (e.g., blacks, non-blacks). Finally, the simplified tables allow users to generate "rough" standard error estimates using generated standard errors based on population size.

The estimates in this paper were generated in SAS and corrected by using the variance estimation strategy in Tupek. We also crosschecked the results from this method with standard errors generated via the generalized variance procedure noted above and found that the generated standard errors were roughly equivalent.

Estimated Standard Errors

Appendix Table B1. Standard Errors For Table 4

		Disability	Participation Restriction		Activity Limitation		Impairment	
	No Disability	At least 1 of the disabilities	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
Summary								
Ages 6 and Older								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	0.300	0.300	NA	NA	NA	NA	NA	NA
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA
Age 6-17								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	0.516	0.516	0.427	NA	0.123	0.433	NA	0.253
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA
Age 18 to 69								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	0.343	0.343	0.264	0.163	0.134	0.153	0.299	0.185
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA
Ages 70 and older								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	1.129	1.129	NA	0.959	0.811	0.545	1.148	0.990
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA
Detailed Age Breakdowns								
Ages 18 to 24								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	0.649	0.649	0.469	0.262	0.166	0.444	0.425	0.316
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA

Continued

Appendix Table B1 (continued). Standard Errors For Table 4

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the disabilities	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
Detailed Age Breakdowns								
Ages 25 to 61								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	0.387	0.387	0.299	0.181	0.150	0.171	0.335	0.207
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA
Ages 62 to 64								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	2.252	2.252	1.935	1.297	1.073	0.887	2.168	1.399
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA
Ages 65 to 69								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	1.861	1.861	1.539	1.116	0.972	0.562	1.826	1.211
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA
Ages 65 and older								
Population Estimate	NA	NA	NA	NA	NA	NA	NA	NA
Prevalence Rate	0.976	0.976	NA	0.765	0.647	0.424	0.985	0.797
Sample Size	NA	NA	NA	NA	NA	NA	NA	NA

Source: 2001 SIPP wave 5

Appendix Table B2. Standard Errors For Table 5

Characteristic	No Disability	Disability: At least 1 of the 6	Participation Restriction: Work Limitation	Activity Limitation: IADLs	Activity Limitation: ADLs	Impairment: Mental	Impairment: Physical	Impairment: Sensory
Total prevalence	0.386	0.386	0.299	0.181	0.150	0.171	0.335	0.207
Age								
% 25 to 34	0.506	0.806	1.044	1.747	1.904	2.390	0.886	1.544
% 35 to 44	0.517	0.978	1.316	2.222	2.612	2.581	1.137	1.884
% 45 to 54	0.486	1.075	1.451	2.493	3.072	2.546	1.290	2.206
% 55 to 61	0.355	0.959	1.314	2.279	2.809	1.837	1.190	1.990
Gender								
% Male	0.552	1.115	1.513	2.562	3.103	2.765	1.303	2.268
% Female	0.552	1.115	1.513	2.562	3.103	2.765	1.303	2.268
Race								
% Asian	0.232	0.367	0.435	0.802	0.916	0.749	0.433	0.846
% Black	0.349	0.802	1.170	1.999	2.493	1.990	0.956	1.557
% Native American	0.119	0.289	0.389	0.691	0.768	0.859	0.344	0.656
% White	0.415	0.888	1.256	2.162	2.654	2.197	1.058	1.793
Ethnicity								
% Hispanic	0.366	0.716	0.949	1.700	1.976	1.689	0.837	1.499
Education								
% Less than High School	0.313	0.877	1.296	2.230	2.619	2.414	1.049	1.844
% High School/GED	0.504	1.073	1.469	2.495	3.014	2.612	1.272	2.157
% Some College	0.506	1.031	1.349	2.348	2.895	2.451	1.234	2.078
% Four Year College Graduate or more	0.514	0.821	0.934	1.557	1.939	1.917	0.976	1.603

Source: 2001 SIPP wave 5

Appendix Table B3. Standard Errors For Table 6

% Employed During…	No Disability	Disability: At least 1 of the 6	Participation Restriction: Work Limitation	Activity Limitation: IADLs	Activity Limitation: ADLs	Impairments: Mental	Impairments: Physical	Impairments: Sensory
All								
Reference Period (any earnings May 2002)	0.336	0.896	1.081	1.662	2.097	2.132	1.063	1.806
Sometime in Previous Year (52 hours or more in year)	0.257	0.874	1.188	1.958	2.435	2.201	1.048	1.741
Full-Time in Previous Year (35 hours or more and 50 weeks or more)	0.435	0.830	0.870	1.344	1.784	1.776	0.973	1.733
Men								
Reference Period	0.379	1.367	1.621	2.634	3.355	3.133	1.736	2.520
Sometime in Previous Year	0.219	1.313	1.759	3.102	3.857	3.194	1.704	2.380
Full-Time in Previous Year	0.582	1.308	1.369	2.275	2.976	2.715	1.630	2.531
Women								
Reference Period	0.536	1.184	1.446	2.142	2.683	2.892	1.345	2.557
Sometime in Previous Year	0.449	1.167	1.606	2.521	3.139	3.028	1.330	2.522
Full-Time in Previous Year	0.616	1.063	1.098	1.626	2.198	2.296	1.208	2.308
White								
Reference Period	0.366	1.002	1.257	1.916	2.436	2.416	1.190	2.011
Sometime in Previous Year	0.281	0.966	1.362	2.239	2.806	2.461	1.164	1.915
Full-Time in Previous Year	0.477	0.944	1.030	1.560	2.115	2.073	1.104	1.972
Black								
Reference Period	0.998	2.214	2.209	3.742	4.430	4.840	2.653	4.632
Sometime in Previous Year	0.741	2.284	2.591	4.529	5.278	5.273	2.721	4.756
Full-Time in Previous Year	1.290	1.824	1.589	2.953	3.386	3.234	2.210	3.713
Hispanic								
Reference Period	1.050	2.646	3.159	4.368	4.812	6.556	3.147	5.200
Sometime in Previous Year	0.850	2.662	3.623	5.589	6.978	7.130	3.261	5.014
Full-Time in Previous Year	1.275	2.297	2.422	3.193	3.409	5.230	2.721	4.522
Native American								
Reference Period	3.307	6.374	6.248	9.108	14.783	10.095	7.483	12.009
Sometime in Previous Year	2.628	6.464	7.778	11.657	17.517	11.896	7.693	12.092
Full-Time in Previous Year	3.933	5.286	3.113	6.101	6.101	6.718	5.689	10.701

Continued

Appendix Table B3 (continued). Standard Errors For Table 6

		Disability	Participation Restriction		Activity Limitation	Impairments		
% Employed During…	No Disability	At least 1 of the 6	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
Asian								
Reference Period	1.704	5.446	7.974	11.271	15.651	14.885	6.655	9.842
Sometime in Previous Year	1.331	5.111	8.331	13.383	18.993	16.426	6.424	9.027
Full-Time in Previous Year	2.067	5.355	7.133	9.101	15.651	11.560	6.479	9.657
LT High School								
Reference Period	1.304	1.795	1.676	2.453	3.337	3.533	2.055	3.632
Sometime in Previous Year	1.089	1.951	2.074	3.065	4.348	3.718	2.265	3.796
Full-Time in Previous Year	1.449	1.460	1.287	1.910	2.583	2.462	1.631	3.001
High School								
Reference Period	0.635	1.491	1.727	2.742	3.302	3.577	1.779	3.070
Sometime in Previous Year	0.490	1.470	1.909	3.276	3.974	3.781	1.766	2.961
Full-Time in Previous Year	0.798	1.349	1.299	2.059	2.806	2.875	1.589	2.948
More Than High School								
Reference Period	0.408	1.321	1.935	2.985	3.651	3.507	1.581	2.678
Sometime in Previous Year	0.305	1.206	1.996	3.330	3.938	3.415	1.462	2.457
Full-Time in Previous Year	0.551	1.317	1.677	2.569	3.203	3.211	1.550	2.739

Source: 2001 SIPP waves 2-5, reference months June 2001-May 2002.

Appendix Table B4. Standard Errors For Table 7

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the 6	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
All								
% Below Poverty Line	0.244	0.785	1.188	2.038	2.427	2.140	0.938	1.546
Mean Income to Needs Ratio	0.036	0.056	0.063	0.103	0.129	0.116	0.067	0.103
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	510.947	807.428	914.185	1578.836	1933.420	1875.215	958.427	1465.434
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA
Men								
% Below Poverty Line	0.312	1.154	1.686	3.133	3.832	2.882	1.484	2.114
Mean Income to Needs Ratio	0.053	0.082	0.093	0.160	0.208	0.159	0.105	0.150
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	739.365	1199.332	1360.068	2449.676	3343.963	2512.206	1516.800	2155.710
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA
Women								
% Below Poverty Line	0.374	1.066	1.665	2.684	3.139	3.123	1.209	2.258
Mean Income to Needs Ratio	0.048	0.076	0.085	0.135	0.164	0.170	0.087	0.141
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	705.425	1090.509	1232.176	2065.669	2301.720	2771.532	1235.178	1962.236
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA
White								
% Below Poverty Line	0.248	0.828	1.297	2.262	2.664	2.275	0.996	1.617
Mean Income to Needs Ratio	0.040	0.065	0.076	0.122	0.152	0.135	0.078	0.118
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	569.928	926.969	1087.072	1861.011	2248.490	2134.940	1099.832	1637.085
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA
Black								
% Below Poverty Line	0.982	2.400	3.048	5.107	5.894	6.298	2.828	5.005
Mean Income to Needs Ratio	0.069	0.098	0.091	0.156	0.198	0.207	0.117	0.198
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	1074.464	1606.178	1615.313	2664.329	3544.376	4369.186	1844.555	3367.388
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA

Continued

Appendix Table B4 (continue). Standard Errors For Table 7

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the 6	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
Hispanic								
% Below Poverty Line	0.948	2.659	3.810	6.430	8.143	7.638	3.274	4.989
Mean Income to Needs Ratio	0.073	0.106	0.137	0.238	0.265	0.264	0.127	0.203
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	1183.957	1739.178	2348.219	3820.315	4608.322	4965.317	2083.694	3162.939
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA
Native American								
% Below Poverty Line	2.990	6.462	9.556	15.495	23.329	15.059	7.909	12.160
Mean Income to Needs Ratio	0.244	0.233	0.284	0.433	0.690	0.299	0.260	0.473
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	3671.532	3531.743	3700.989	5903.355	8501.628	4179.758	4095.370	6642.952
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA
Asian								
% Below Poverty Line	1.183	4.206	6.684	11.792	17.877	10.962	5.198	8.059
Mean Income to Needs Ratio	0.194	0.340	0.358	1.001	1.642	0.626	0.452	0.669
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	2857.257	5426.438	5838.514	15043.188	23392.572	11872.250	7151.503	10684.912
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA
LT High School								
% Below Poverty Line	1.287	2.156	2.646	4.538	5.901	4.726	2.574	3.951
Mean Income to Needs Ratio	0.051	0.058	0.059	0.105	0.114	0.108	0.069	0.114
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	921.822	1057.784	1144.172	1913.323	2135.163	2235.102	1207.419	2043.991
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA
High School								
% Below Poverty Line	0.497	1.334	1.913	3.290	3.979	3.678	1.599	2.638
Mean Income to Needs Ratio	0.044	0.072	0.088	0.153	0.198	0.176	0.085	0.165
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	667.581	1046.115	1301.447	2303.051	3042.300	2814.504	1221.031	2317.285
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA

Continued

Appendix Table B4 (continue). Standard Errors For Table 7

		Disability	Participation Restriction		Activity Limitation	Impairment		
	No Disability	At least 1 of the 6	Work Limitation	IADLs	ADLs	Mental	Physical	Sensory
More than High School								
% Below Poverty Line	0.245	0.959	1.693	2.868	3.106	2.788	1.142	1.965
Mean Income to Needs Ratio	0.051	0.100	0.127	0.201	0.233	0.222	0.120	0.175
Median Income to Needs Ratio	NA	NA	NA	NA	NA	NA	NA	NA
Mean Family Income	724.850	1442.236	1827.701	3109.408	3478.666	3564.640	1715.241	2467.670
Median Family Income	NA	NA	NA	NA	NA	NA	NA	NA

Source: 2001 SIPP waves 2-5, reference months June 2001-May 2002.

Appendix Table B5. Standard Errors For Table 8

	No Disability	At least 1 of the disabilities	No Work Limitation	Work Limitation
Full Sample Size				
Population Estimate	NA	NA	NA	NA
Wave 5 and 8 Sample Size [a]				
Population Estimate	NA	NA	NA	NA
Changes in Work Limitation Status				
% Work Limitation in Wave 5	0.000	1.202	0.000	0.000
%Work Limitation 1 year later	NA	1.185	NA	1.401
%With No Work Limitation 1 year later	NA	0.815	NA	1.401
% Without Work Limitation in Wave 5	0.000	1.202	0.000	0.000
%Work Limitation 1 year later	0.179	0.543	0.199	NA
%With No Work Limitation 1 year later	0.179	1.185	0.199	NA
Monthly Employment [b]				
%Employed (May 2002)	0.446	1.206	0.431	1.463
%Employed 1 year later (May 2003)	0.500	1.192	0.481	1.349
%Not employed 1 year later (May 2003)	0.283	0.621	0.273	0.777
%Not Employed (May 2002)	0.446	1.206	0.431	1.463
%Employed 1 year later (May 2003)	0.273	0.594	0.262	0.778
%Not employed 1 year later (May 2003)	0.378	1.197	0.367	1.545
Monthly Program Participation				
%Receiving TANF, GA, or SSI (May 2002)	0.083	0.832	0.087	1.396
%Receiving TANF, GA or SSI 1 year later (May 2003)	0.059	0.761	0.066	1.296
%Not Receiving TANF, GA, or SSI 1 year later (May 2003)	0.058	0.384	0.057	0.675
%Not Receiving TANF, GA, or SSI (May 2002)	0.083	0.832	0.087	1.396
%Receiving TANF, GA or SSI 1 year later (May 2003)	0.073	0.399	0.076	0.654
%Not Receiving TANF, GA, or SSI 1 year later (May 2003)	0.110	0.898	0.115	1.470

Continued

Appendix Table B5 (continued). Standard Errors For Table 8

	No Disability	At least 1 of the disabilities	No Work Limitation	Work Limitation
Monthly Program Participation				
%Receiving SSI or Social Security (May 2002)	0.092	1.040	0.102	1.615
%Receiving SSI or Social Security 1 year later (May 2003)	0.071	1.007	0.083	1.595
%Not Receiving SSI or Social Security 1 year later (May 2003)	0.059	0.356	0.059	0.609
%Not Receiving SSI or Social Security (May 2002)	0.092	1.040	0.102	1.615
%Receiving SSI or Social Security 1 year later (May 2003)	0.111	0.502	0.114	0.800
%Not Receiving SSI or Social Security 1 year later (May 2003)	0.144	1.097	0.152	1.630

Source: 2001 SIPP waves 5 and 6

Appendix Table B6. Standard Errors For Table 9

	Group 1: No Work Limitations in Wave 2 or wave 5	Group 2: Work Limitations in Wave 2, but not Wave 5	Group 3: Work Limitations in Wave 5, but not Wave 2	Group 4: Work Limitations in Waves 2 and 5
Sample Size [a]				
Population Estimate	NA	NA	NA	NA
Health Status in Wave 5				
Excellent/Very Good	0.501	3.062	2.349	1.173
Good	0.474	3.000	2.649	1.582
Fair/Poor	0.230	2.526	2.909	1.785
ADL or IADLs in Wave 5				
IADLs	0.072	1.162	2.174	1.812
ADLs	0.065	1.130	1.930	1.591
Impairments in Wave 5				
Mental	0.114	1.323	1.607	1.636
Physical	0.269	2.864	2.842	1.654
Sensory	0.175	1.767	1.931	1.630
Employment in Wave 5 [b]				
%Employed	0.405	2.920	2.897	1.515
%Not Employed	0.405	2.920	2.897	1.515
Family Income to Needs in Wave 5				
Mean	0.043	0.178	0.152	0.094

Source: 2001 SIPP waves 2 and 5

Appendix Table B7. Standard Errors For Table 10

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8	Wave 9
Percent with Work Limitation	0.279	0.292	0.300	0.293	0.299	0.302	0.299	0.302	0.306

Source: 2001 SIPP waves 1 through 9

Note: If respondent responded yes to question about work limiting condition in any month of the wave, they are coded as having a work limiting condition. Age is average age over the wave.

Appendix C: Additional Descriptive Tables

Appendix Table C1. Prevalence of Overlap Across Disability Concepts, Ages 25-61

	Participation Restriction		Activity Limitation	Impairment		
	Work Limitation	**IADLs**	**ADLs**	**Mental**	**Physical**	**Sensory**
Total Prevalence	10.1	3.5	2.4	3.1	13.2	4.6
Disability Definition						
Work Limitations	100.0	85.7	83.1	64.6	53.0	46.0
IADLS	29.3	100.0	78.1	35.7	23.8	27.9
ADLs	19.4	53.3	100.0	18.5	17.5	20.4
Mental	19.7	31.9	24.2	100.0	12.2	18.6
Physical	69.1	90.8	97.8	52.1	100.0	58.2
Sensory	20.7	36.7	39.5	27.5	20.1	100.0

Source: 2001 SIPP wave 5 Functional Limitations and Disability TM

Appendix Table C2. Quarterly Changes in Health, Employment and Program Participation Status Since Interview Wave 5 of the 2001 SIPP Panel, by Disability Status, Ages 25-61

	No Disability	At least 1 of the disabilities	No Work Limitation	Work Limitation
Full Sample Size	27,358	6,621	30,334	3,645
Population Estimate	115,870,000	26,623,078	128,070,000	14,423,813
Wave 5 and 6 Sample Size [1]	25,420	6,156	28,190	3,386
Population Estimate	107,900,000	24,930,000	119,300,000	13,510,000
Changes in Work Limitation Status				
% Work Limitation in Wave 5	0.0	54.2	0.0	100.0
%Work Limitation in Wave 6	NA	43.1	NA	79.5
%With No Work Limitation in Wave 6	NA	11.1	NA	20.5
% Without Work Limitation in Wave 5	100.0	45.9	100.0	0.0
%Work Limitation in Wave 6	1.9	4.9	2.8	NA
%With No Work Limitation in Wave 6	98.1	41.0	97.2	NA
Monthly Employment [2]				
%Employed (May 2002)	82.5	49.2	81.8	27.8
%Employed 4 months later (Sept 2002)	78.1	44.4	77.3	23.3
%Not employed 4 months later (Sept 2002)	4.4	4.9	4.5	4.4
%Not Employed (May 2002)	17.5	50.8	18.2	72.2
%Employed 4 months later (Sept 2002)	4.3	4.9	4.5	4.3
%Not employed 4 months later (Sept 2002)	13.1	45.8	13.8	67.9
Monthly Program Participation				
%Receiving Means Tested Cash Transfer (May 2002)	0.9	15.3	1.1	26.0
%Receiving Means Tested Cash Transfer 4 months later (Sept 2002)	0.6	13.5	0.8	23.0
%Not Receiving Any Means Tested Transfer 4 months later (Sept 2002)	0.3	1.9	0.3	3.0

Continued

Appendix Table C2 (continued). Quarterly Changes in Health, Employment and Program Participation Status Since Interview Wave 5 of the 2001 SIPP Panel, by Disability Status, Ages 25-61

	No Disability	At least 1 of the disabilities	No Work Limitation	Work Limitation
Monthly Program Participation	27,358	6,621	30,334	3,645
%Not Receiving Means Tested Cash Transfer (May 2002)	99.1	84.7	98.9	74.0
%Receiving Means Tested Cash Transfer 4 months later (Sept 2002)	0.3	1.8	0.4	2.8
%Not Receiving Any Means Tested Transfer 4 months later (Sept 2002)	98.8	82.8	98.6	71.2
%Receiving TANF, GA, or SSI (May 2002)	0.5	14.2	0.6	24.6
%Receiving TANF, GA or SSI 4 months later (Sept 2002)	0.3	12.4	0.4	21.7
%Not Receiving TANF, GA, or SSI 4 months later (Sept 2002)	0.2	1.8	0.2	3.0
%Not Receiving TANF, GA, or SSI (May 2002)	99.5	85.8	99.4	75.3
%Receiving TANF, GA or SSI 4 months later (Sept 2002)	0.2	1.6	0.3	2.6
%Not Receiving TANF, GA, or SSI 4 months later (Sept 2002)	99.3	84.2	99.2	72.8
%Receiving SSI or Social Security (May 2002)	0.6	25.0	0.9	43.4
%Receiving SSI or Social Security 4 months later (Sept 2002)	0.4	23.4	0.6	41.1
%Not Receiving SSI or Social Security 4 months later (Sept 2002)	0.2	1.5	0.2	2.3
%Not Receiving SSI or Social Security (May 2002)	99.4	75.1	99.2	56.5
%Receiving SSI or Social Security 4 months later (Sept 2002)	0.3	2.1	0.4	3.2
%Not Receiving SSI or Social Security 4 months later (Sept 2002)	99.1	73.0	98.8	53.3

Source: 2001 SIPP core waves 5 and 6 and the wave 5 Functional Limitations and Disability TM.

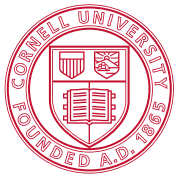
[1] Because of attrition, there are respondents who do not have data in both time periods (May 2002 and September 2002). The amount of attrition is larger than in previous tables, though likely does not have a substantive effect on the findings.

[2] Employed is defined as any earnings during the month.

Appendix Table C3. Multi-period (one quarter) Disability Definitions, by Disability Status, Ages 25-61

	Group 1: No Work Limitations in Wave 4 or Wave 5	Group 2: Work Limitations in Wave 4, but not Wave 5	Group 3: Work Limitations in Wave 5, but not Wave 4	Group 4: Work Limitations in Waves 4 and 5
Sample Size [1]	27,897	661	769	2,652
Population Estimate	118,500,000	2,747,725	3,152,649	10,500,000
Health Status in Wave 5				
%Excellent/Very Good	71.5	36.8	21.8	11.2
%Good	24.0	40.0	32.3	22.3
%Fair/Poor	4.5	23.2	45.9	66.5
ADL or IADLs in Wave 5				
%IADLs	0.5	4.1	12.5	34.7
%ADLs	0.4	4.1	9.2	22.7
Impairments in Wave 5				
%Mental	1.1	5.1	7.8	23.5
%Physical	6.4	29.2	59.3	72.5
%Sensory	2.6	7.9	12.4	23.2
Employment in Wave 5 [2]				
%Employed	84.1	63.2	63.2	19.6
%Not Employed	15.9	36.8	36.8	80.5

Source: 2001 SIPP core waves 4 and 5 and the wave 5 Functional Limitations and Disability TM.
[1] Wave 4 and 5 sample size represents respondents who had at least one month of data in both waves 4 and 5 and answered the wave 5 topical module.
[2] Employed is defined as any earnings during the month.



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